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VERMILION PLANNING REPORT

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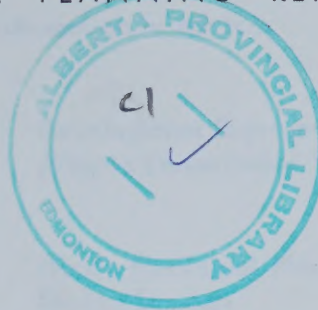
DEPARTMENT OF MUNICIPAL AFFAIRS

APRIL 1971

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A L B E R T A

TOWN OF VERMILION PLANNING REPORT



RESEARCH PLANNING SECTION

PROVINCIAL PLANNING BRANCH

DEPARTMENT OF MUNICIPAL AFFAIRS

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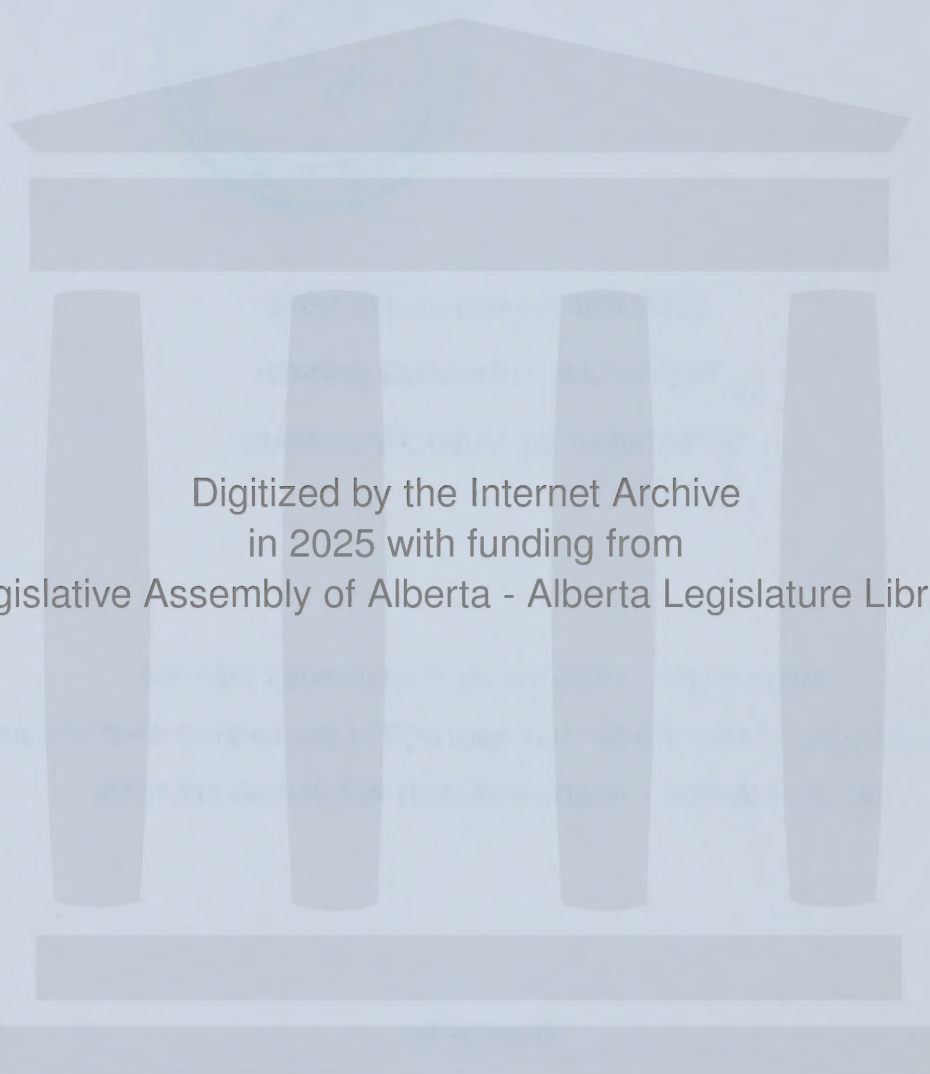
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BACKGROUND TO THE PLANNING REPORT

A study of the Town of Vermilion has shown that the community has experienced few major changes over the past ten years. There is little reason to assume that this trend of stabilization or normal growth will not continue. The complexity of a rapidly growing centre is not the case here. It was decided therefore, that a planning report, which is not as detailed as a general plan (particularly in matters such as programming and implementation), would provide adequate guidelines for future growth. If however, a rapid change in the development pattern occurs subsequent to the end of the planning period, 1991, it is advisable that the town encourage provisions for a General Plan.

This report is designed to serve as a directive, describing the manner in which the future development or re-development of Vermilion may best be carried out. The report is prepared on the basis of surveys and studies of land use, population characteristics, town economy (commercial and industrial needs), recreation and education needs, transportation and communication characteristics, public services and utilities, and other relevant factors. An analysis of the data is provided and policy of recommendations and proposals are given following the completion of each chapter. It is within the overall interests of this report to preserve and refine the existing function of the town as a major centre of an important agricultural region.

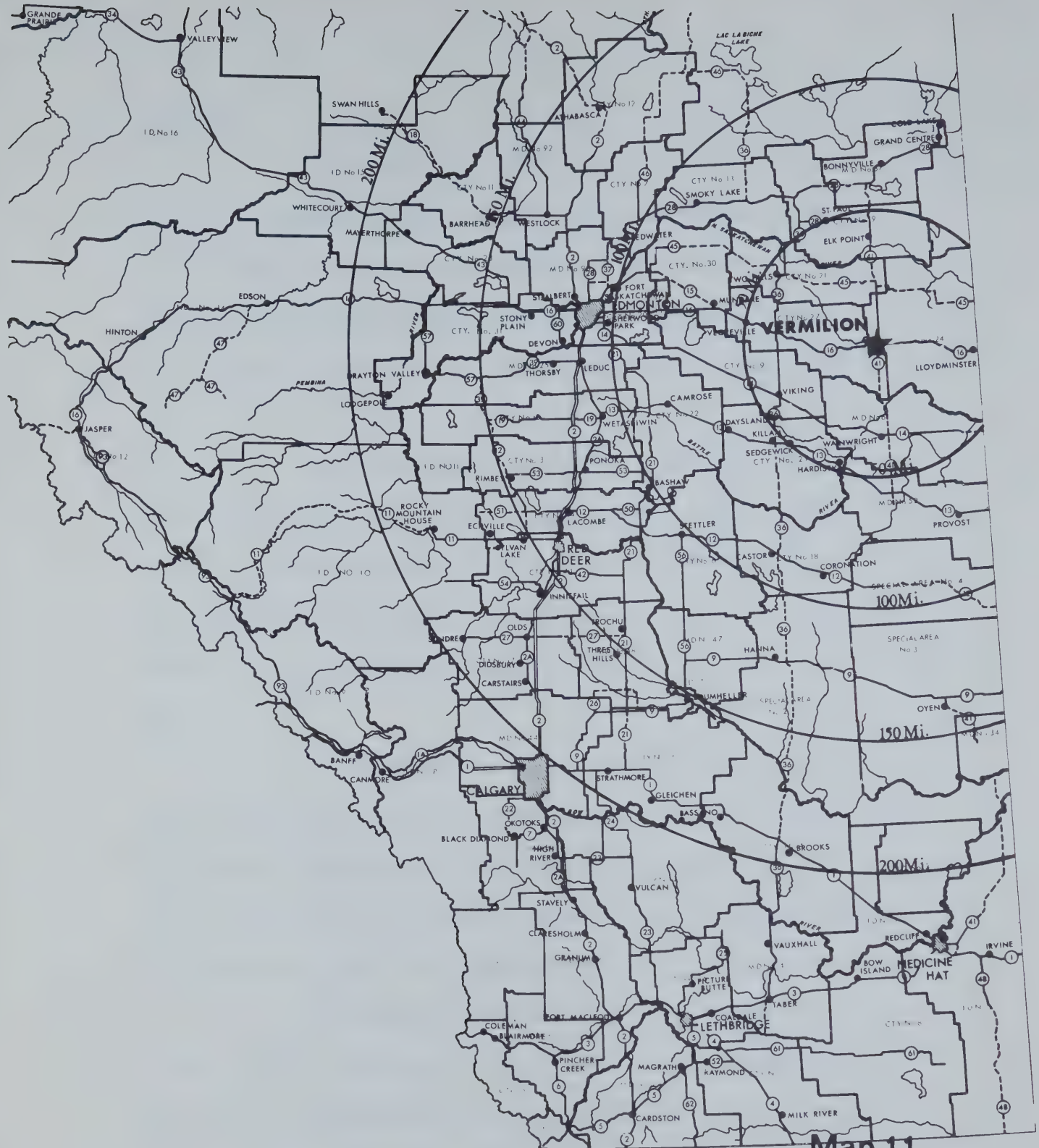
INTRODUCTION

A. SETTING

The Town of Vermilion is located in east-central Alberta, 120 miles east of Edmonton on Highway 16. It is situated on level land 100 feet above the valley of the Vermilion River, a tributary of the North Saskatchewan. The area around the town has been described as rough, undulating and morainic by the Canada Land Inventory. Glacial deposits, mainly till, are common to most of the area.

Vermilion is in the midst of a prosperous mixed farming area. Cereal grains, especially wheat, are the most important crops, and are complimented by livestock interests. Chernozemic soils dominate the area, though gleysols are often associated with moraines and solonetzic soils often occur in the level to gently sloping areas. The original parkland vegetation has for the most part been modified by man, though certain quarter sections are only partially cultivated due to rough topography and sloughs.

The climate of the Vermilion area is, of course, continental in nature. Winters are severe with January mean daily temperatures varying from a high of 10° to a low of -7.2° . The area is too far east to be regularly affected by the warming Chinook wind and snow remains on the ground throughout the winter. Frost can be a hazard to cereal production in both spring and fall. Summers are warm and at times the heat is oppressive. July temperatures range from a mean daily high of 74.6° to mean daily minimum of 49.2° . The average annual precipitation at Vermilion is 15.76 inches, 11.53 inches of which occur in the form of rain. The heaviest precipitation occurs from June to August.



Map 1.1

VERMILION PLANNING REPORT REGIONAL SETTING

0 25 MI. 50 MI.

B. SETTLEMENT

The modern history of the Town of Vermilion and the surrounding area dates back to the turn of the century, even though the area was traversed by traders and trappers long before. In the last years of the 1890's a number of ranchers settled in the Vermilion area, and soon after a post office was established at Breage, several miles east of the present townsite.

Rapid growth and expansion occurred during the first decade of this century. The area was surveyed in 1902 and with the coming of the Canadian Northern Railway (later to become the CNR) in 1905 the post office was moved to Vermilion and the townsite was surveyed. In 1906 Vermilion became a village and only a few months later was incorporated as a town.

The early settlers of the Vermilion area came mainly from Eastern Canada, Great Britain and the United States, with others coming directly from Continental Europe, especially the Ukraine. Many came via the Old Battleford Trail from either Saskatoon or Edmonton, while others come down the North Saskatchewan River by scow and then overland to the Vermilion area.

Rapid population growth continued until the inter-war period. The 1921 population of Vermilion (1,272) was over double that of 1911. Most of the business section was wiped out by fire in 1918, but this area was rapidly rebuilt and a number of these buildings exist today. Population growth has never equaled that of the first part of the century. Between 1921

and 1941 the increase was only slight, and was non-existent in the first part of that period. The decades from 1941 - 1951 and 1951 - 1961 each showed approximately a thirty-three percent population increase. The 1966 population of the town was 2,685 (D.B.S.) and in October 1970 the population of Vermilion was 2,949 (Town Census).

C. REGIONAL IMPORTANCE

Vermilion is now one of a number of medium-sized centres in north-east and east-central Alberta. The other centres of somewhat similar importance and which may come into competition with Vermilion are shown in the following table.

TABLE 1.1
CHARACTERISTICS OF CERTAIN CENTRES IN THE VICINITY OF VERMILION

	Population ¹	No. of Functions (Based on 48 possible) ²	No. of Licensed Businesses (1969 - 1970)
Lloydminster	7,807 (69)	43	73 (Alberta only)
St. Paul	4,051 (69)	40	93
Vegreville	3,776 (69)	43	96
Wainwright	3,735 (68)	40	-
Vermilion	2,949 (70)	40	87
Viking	1,193 (69)	24	90
Two Hills	1,140	26	46

¹ Municipal Councillor

² R. Watson, "Central Places in Alberta", Unpublished paper,
University of Alberta (Geography) 1969

Like most of these centres, Vermilion's main function is that of a retail and service centre for the surrounding rural area. There are 78 commercial establishments (1969; Alberta Bureau of Statistics) of which 39 can be classified as "retail", 25 as "service" and 14 as "other". These establishments employ a total of 240 persons (1969; Alberta Bureau of Statistics). The value of retail trade is on the increase, but per capita retail trade has been declining over the past five or six years.

Vermilion has a number of establishments which can be loosely termed "industrial". These include auto wreckers', plumbers', construction, welding and salvage establishments, and bakeries; but there are only four manufacturing (including processing) industries (1969; Alberta Bureau of Statistics).

These are a seed cleaning plant, a creamery, a beverage plant, and a cement mix plant. In 1969 they employed 38 persons (Alberta Bureau of Statistics). The number of manufacturing industries has dropped from eight in 1955, but in that fifteen year period (1955 - 70) the total number of employees in manufacturing, and the value of shipments of manufacturers have both increased (Alberta Bureau of Statistics). Table 1.2 breaks down the Vermilion labour force.

TABLE 1.2
VERMILION LABOUR FORCE
(October 1970)

Occupation	Male	Female	Total
Professional	110	57	167
Clerical	26	87	113
Service	137	70	207
Retail	88	31	119
Industrial; Wholesale Trade	37	0	37
Construction	85	0	85
Labourers	58	7	65
Agriculture	41	0	41
Transportation	51	0	51
Unemployed	11	7	18
TOTALS	644	259	903 (30.7% of total population) ³

SOURCE: Town Census

³ This is an unusually high figure and possibly reflects the age structure of the town. Other towns in east central and northeast Alberta have figures from 20 to 23 per cent.

The Vermilion trading area,⁴ shown on Map 1.2, was determined by sending a questionnaire to the merchants, professionals, service people and civic organizations of the town. Most of the people living in this area are largely dependent on Vermilion, at least for the goods and services which it does supply. The degree of this dependence, of course, decreases with distance from the town and people living on the fringe of the trading area may well be in the "zone of indifference", obtaining a fair portion of their needs elsewhere.

Furthermore, all types of activity in Vermilion do not have the same size trading area and do not depend on the rural area to the same degree. Agriculture oriented services have the largest trading area⁵ and are naturally least dependent on the townsfolk as customers or clients. Social and recreational type services, with the exception of the Provincial Park, are the only group however, which gains more than one-half of its support from the town residents, and this group has the smallest trade area. This means that the commercial enterprises in Vermilion are largely "basic" in character, i.e. they are bringing money into the town rather than circulating existing money. The amount of dependence on the surrounding area by the various economic activity groups is shown in Table 1.3.

⁴ The area dependent on a town for a large portion of its goods and services is known by a variety of terms - trade area, catchment area, urban field, zone of influence. Since "trading area" has been the most widely used in Alberta studies, it will be used here.

⁵ Grain elevators being the exception since they are also found in nearby smaller centres.

This map illustrates the Vermilion River area in Ontario, Canada. The river is shown flowing from the north towards the south, eventually emptying into the Bay of Quinte. Key towns and locations along the river include St. Paul, Upper Thierien, Edouardville, Armistice, Elk Point, Lindbergh, Laurier, Frog L., Fishing L., Rock Island L., L. Bellevue, L. Eliza, Broseau, Duvernay, North, Kaleland, Two Hills, Vermilion, Musidora, Morecambe, Reservoir, Myrnam, Derwent, Landon, Kelt, Durberry, Hazeldine, Marwayne, Streamstown, Kilscoy, Staplehurst, Blackfoot, Lloydminster, Southminster, Furness, Paradise Valley, Rivercourse, McLaughlin, Baxter Lakes, Wainwright, Fabian Camp, Wainwright, Hawkins, Irma, Jarrow, Vernon L., Kinsella, Philips, Hattie L., Viking, Torlea, and Lavoy. The map also shows the C.N.R. (Canadian National Railway) and various lakes and islands, including Lac Sante, Plain L., Birch L., Thomas L., and Frog L. The Vermilion River is labeled in several places, including 'VERMILION RIVER' and 'VERMILION RIVER'.

Agricultural Service Area - - .

Scale :



Map 1.2

TABLE 1.3

LOCATION OF SUPPORT FOR VARIOUS ECONOMIC ACTIVITIES

Activity	Proportion of Customers, Members, etc. Who Live In Vermilion
Agriculture	6.2
Industry	32.1
Professional	35.0
Auto Sales & Services	37.0
Retail	42.4
Financial	44.0
Service	45.0
Social	61.7

SOURCE: Questionnaire

The above mentioned questionnaire also indicated that Vermilion's trade area has grown slightly over the past five years and that the volume of trade of most of the town's businesses has also increased. It was over \$10 million in 1969, a gross increase of \$4 million from 1961. The greatest increases have been occurring in the professional and financial services, while some auto sales and service firms reported a decrease in their volume of trade over the same five year period.

POPULATION

A. THE TOWN

Population forecasts and trends are an important element in long range planning. In effect, planning is taking place for an increase or decrease of the population. For instance, most acceptable land use standards are expressed on the basis of a population of 100. However, for financial and legal reasons, planning focuses on 10 and 20 year periods and specific dates must be assigned to specific populations. The population projections should only be used as a guide. They assume that no dramatic change in the economic and social conditions of the area will take place during the planning period.

Two relatively simple methods are used to project Vermilion's population. These are (a) the long-term short-term approach used by the Provincial Planning Branch in Population Trends (1967) and (b) a compounded 2.3 percent annual growth based on the trends of the last four years. A more sophisticated and apparently more accurate method, such as the cohort-survival, was not used because:

- (a) The town's population has more or less stabilized at about a ten percent increase per five year period since 1951.
- (b) Vermilion is a relatively small urban centre.

- (c) The migration data and age-sex breakdowns on an annual basis required for a more complex method are not available.
- (d) The computer program required to carry out such a projection is not readily available.

The two simple approaches used provide somewhat different figures which may be regarded as "high" and "low". Both of these methods are based on past trends alone. If present birth, death and migration trends continue, the population should not go beyond the higher or "safe" projections. The "low" projections are just that since the 1971 projection using this method (2,920) has already been surpassed. This would tend to suggest that the "high" estimate has more value.

TABLE 2.1
POPULATION PROJECTIONS

	1976	1981	1986	1991
Low (long-term short-term)	3,158	3,395	3,632	3,869
High (2.3% annual growth)	3,381	3,788	4,243	4,748

If however, an industry which employs a large number of people or another population-attracting facilities should locate in or near Vermilion, all of these figures would, of course, be rather low.

The slow steady growth rate and the projections must be qualified. Vermilion has a larger than average proportion of older people

and this percentage is increasing (see accompanying population pyramids). These older people are responsible for a certain amount of the population increase. The birth rate and the rate of natural increase in Vermilion were lower than the provincial average during the 1960's (Alberta Bureau of Statistics).

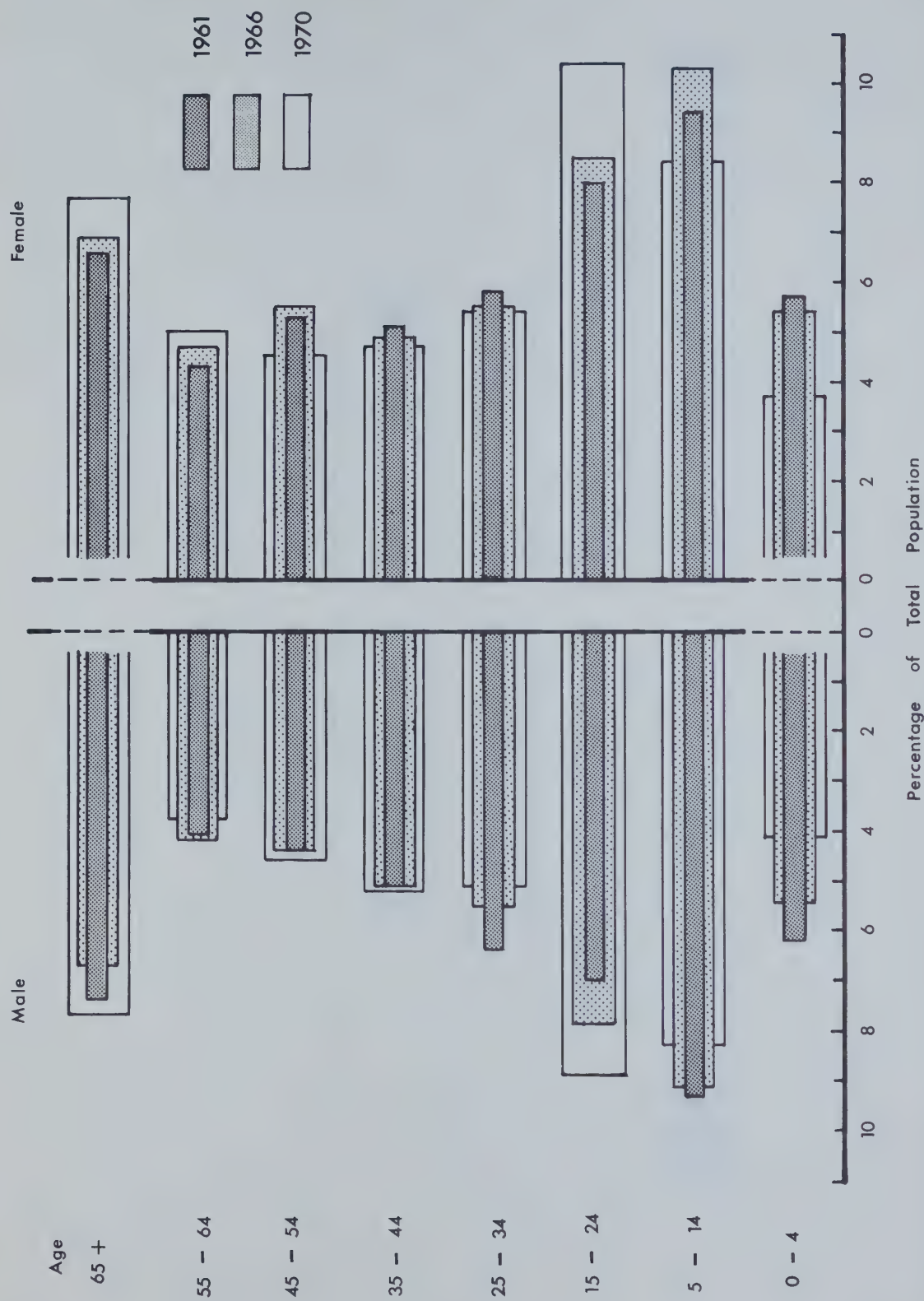
TABLE 2.2
RATES OF POPULATION CHANGE 1960 - 1969

	Birth Rate (Birth's/1000 population)	Death Rate (Death's/1000 population)	Rate of Natural Increase (per 1000 population)
Vermilion	22.6	12.7	9.95
Alberta	24.4	6.6	17.78

The death rate however, was much higher than the provincial average. All of these figures reflect the high proportion of older people and their importance as in-migrants.

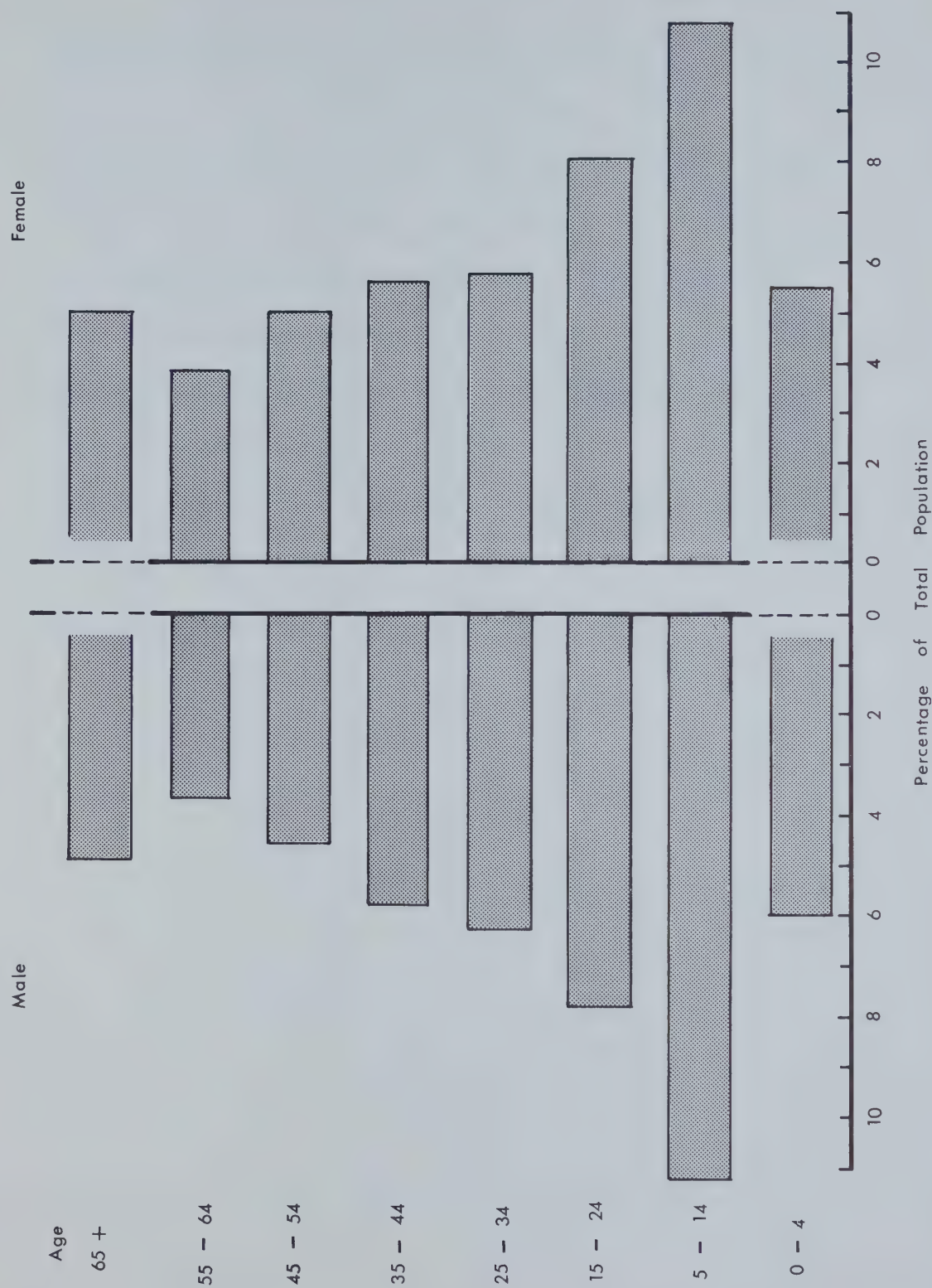
B. THE TRADING AREA

In 1966 the Vermilion trading area had a population of about 16,700. The same area had over 18,000 people in 1951. The decline occurred completely in the rural section of the trading area (a decrease of twenty percent from 13,514 to 10,803). In the same period the population of Vermilion increased by thirty-five percent and the population of the smaller centres in the trading area by twenty-six percent. The entire "Vermilion Region" is now 35.3 percent urban, as opposed to twenty-five percent in 1951.



Source: D.B.S. and Vermilion Census

VERMILION. Population Pyramid



ALBERTA TOWNS (2500 - 5000 POPULATION)
Population Pyramid 1966

Source : D.B.S

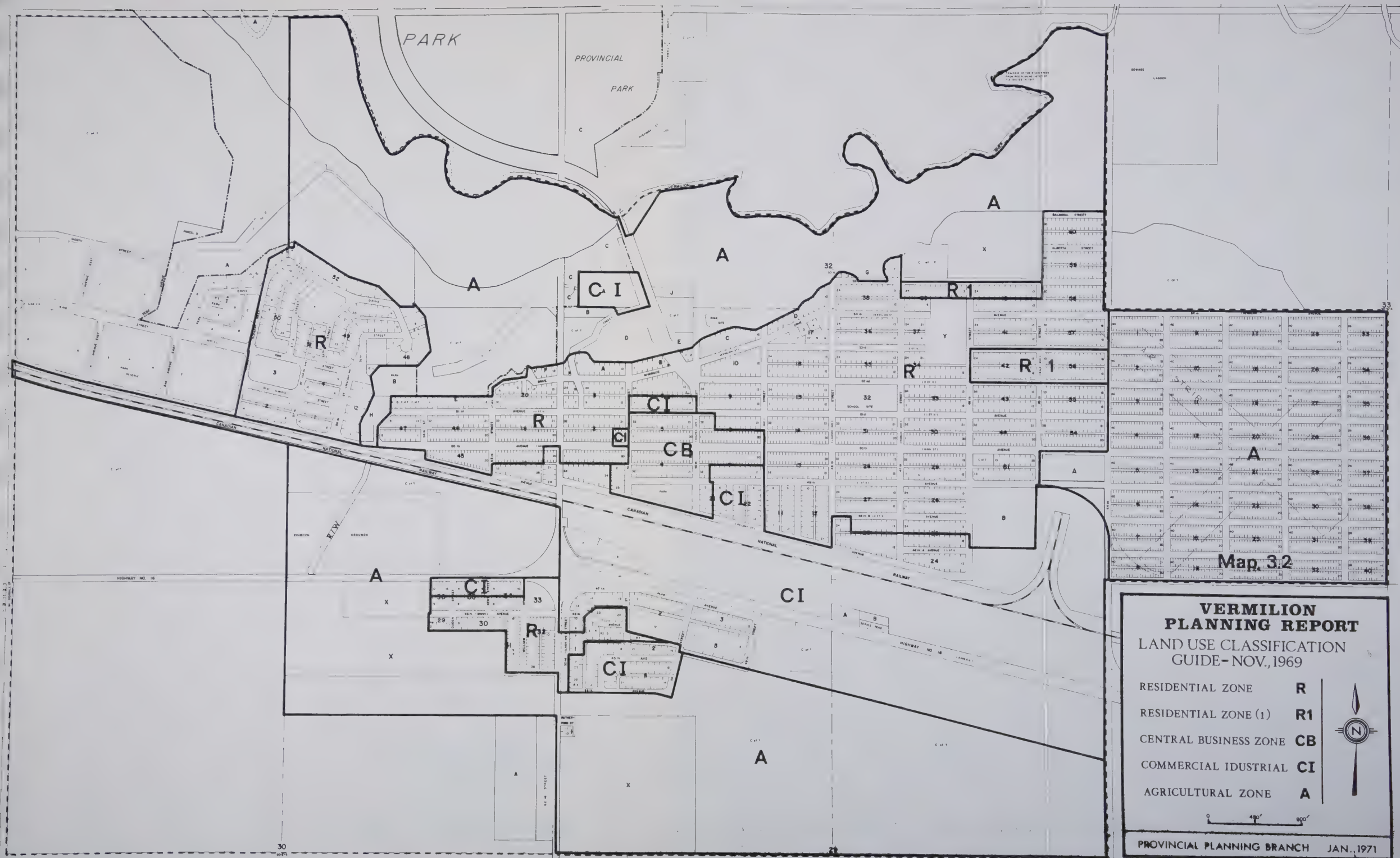
There is little reason to believe that this population trend within the region, and in the Town of Vermilion itself, will not continue for some time. There is little farm land opening up in the area. The general movement towards farm consolidation, combined with decreasing manpower needs on the farm, has resulted, in part at least, in migration towards the towns and cities, especially of younger people. There is no definite indication that this trend will cease during the next several years. With the birth rate declining, the migrants are not being "replaced". Many of these migrants are moving to towns such as Vermilion, while a few are attracted to smaller settlements such as Marwayne, but many others are moving to the larger centres like Edmonton. All central activities in eastern Alberta are becoming concentrated in the four or five medium sized centres.

RESIDENTIAL LAND USE AND HOUSING

The present land use in Vermilion is shown on Map 3.1, and is governed by the land use classification guide, Map 3.2. The latter is presently used in conjunction with the development control bylaw which replaced the zoning bylaw early in 1969 for the duration of the preparation of the general plan. This guide, however, is in fact the zoning map which preceded it. The areas to the west and south of the town which were recently annexed have not been zoned. The town is divided into a number of areas for locational and descriptive convenience, and these are shown on Map 3.3

A. LOCATION OF RESIDENTIAL AREAS

The residential areas in Vermilion surround the central commercial and industrial area. There are a number of households in the central area. Most are found above or behind commercial structures, while only a few occupy primary residential lots. Development extends outwards from the town centre furthest on the eastern and western margins and has been limited on the north side by the steep and irregular slopes of the Vermilion River Valley. The south side area is separated from the rest of the town by the CNR right-of-way and by Highway 16. All residential development is within the present town boundaries. The majority of residential lots measure 30' x 120' or 50' x 120'. There are a number of exceptions, however, including the VLA parcels (three acres) in the west section of the town.



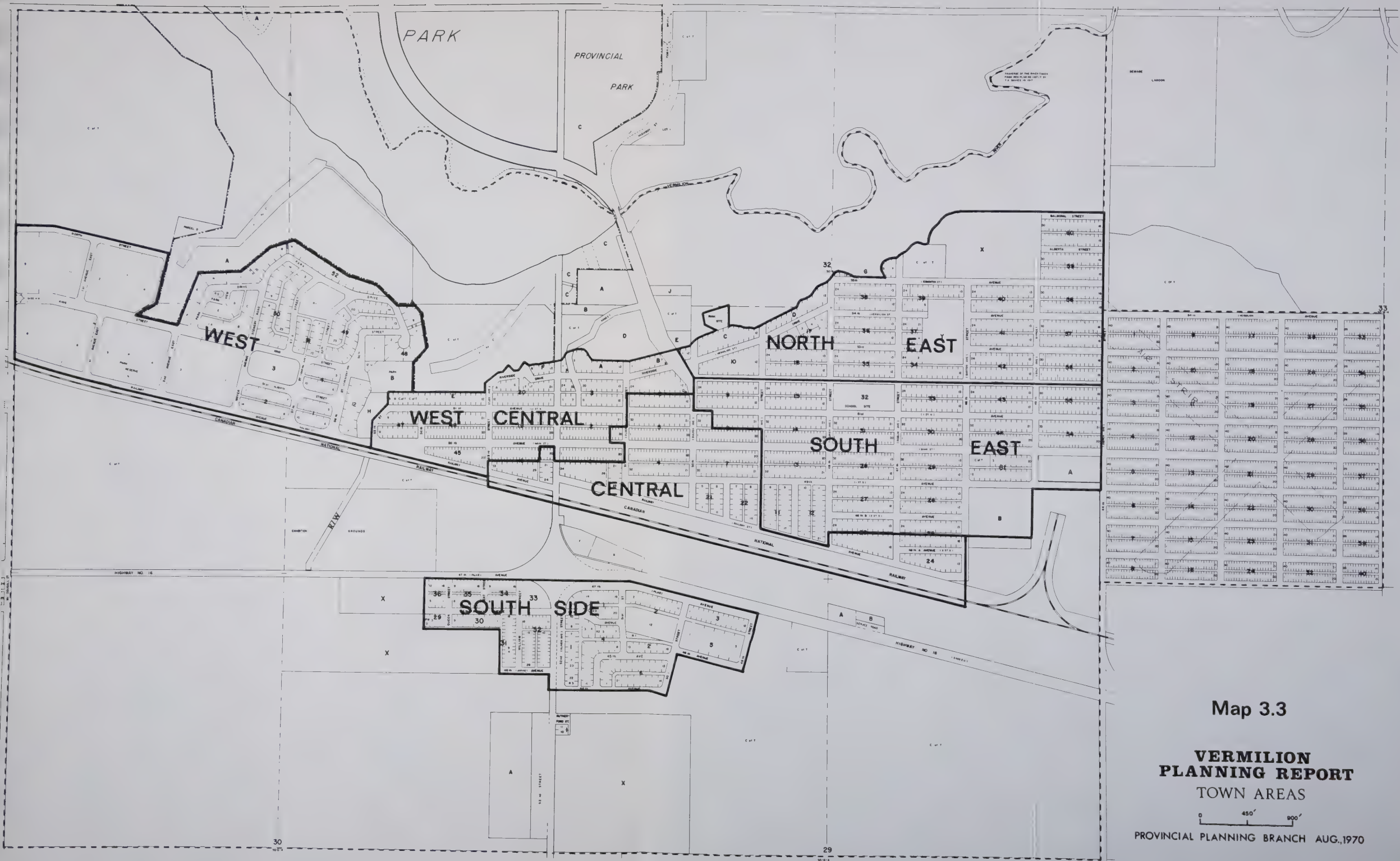
VERMILION PLANNING REPORT

LAND USE CLASSIFICATION
GUIDE - NOV., 1969

- RESIDENTIAL ZONE **R**
- RESIDENTIAL ZONE (1) **R1**
- CENTRAL BUSINESS ZONE **CB**
- COMMERCIAL INDUSTRIAL **CI**
- AGRICULTURAL ZONE **A**



0 400' 800'



Map 3.3

**VERMILION
PLANNING REPORT
TOWN AREAS**

0 450' 900'

PROVINCIAL PLANNING BRANCH AUG. 1970

TABLE 3.1

LAND USE CHARACTERISTICS

	Land Use	Total Acres	% of Developed Land
I.	RESIDENTIAL		
1.	Single Family (including Country Residence)	140.81	11.31
2.	Two Family	.43	.03
3.	Multi-Family	.44	.04
4.	Trailer Courts	2.76	.22
5.	Institutional Residence	4.48	.36
	Total	148.92	11.96%
II.	COMMERCIAL	19.37	1.56%
III.	WHOLESALE TRADE AND WAREHOUSES		
1.	Warehouses, Lumber yards, etc.	10.33	
2.	Grain Elevators	5.33	
	Total	15.66	1.26%
IV.	INDUSTRY	5.11	.41%
V.	GOVERNMENTAL	2.85	.23%
VI.	COMMUNITY FACILITIES	2.88	.23%
VII.	EDUCATIONAL FACILITIES		
1.	Schools	35.96	
2.	Colleges & Technical Schools	133.68	
	Total	427.53	34.35%
VIII.	PARKS AND RECREATION		
1.	Recreation Facilities	60.91	
2.	Playground	.74	
3.	Parks and Urban Reserves	6.50	
	Total	68.15	5.00%
	4. Provincial Park within town	116.57	9.00%

cont'd...

	Land Use	Total Acres	% of Developed Land
IX.	MEDICAL SERVICES	6.40	.51%
X.	TRANSPORTATION & COMMUNICATION		
1.	Railway Property	78.16	
2.	Airfields	163.67	
3.	Parking Lots	.82	
4.	Highway & Street Rights-of-Way	188.06	
	Total	430.71	34.60%
XI.	UTILITIES	5.49	.44%
	Gross Total Area	1818.66	
	Total Developed Area	1244.87	
	Town Boundary	1785.37	
XII.	AGRICULTURAL	213.90	
XIII.	VACANT LAND		
1.	Undeveloped Usable	124.33	
2.	Unusable Land	109.44	
3.	Land Covered by water	92.83	
	Total	326.60	

B. PHYSICAL CHARACTERISTICS OF RESIDENTIAL BUILDINGS

Vermilion has a total of 811 residential buildings,¹ of which 757 are of a single family type (October 1970). A breakdown of these buildings is shown in Table 3.2. Nearly eighty percent of the residential buildings are one storey; there are also a number of 1 1/2, 1 3/4 and two storey dwellings. There are less than a dozen split-level residences.

TABLE 3.2

VERMILION RESIDENTIAL BUILDINGS

Type	Number	Percentage
Single Family (including 33 mobile homes)	759	93.6
Two Family	37	4.6
Three Family	7	0.9
Four Family	5	0.6
Multi-Family	3	0.3
Total	811	100.0

Assessment information can be used as an indicator of building condition. Poor and poor to fair buildings (E and F rating) are at the lower end of the assessment scale.² Just over twenty percent (159) of the residential

¹ This excludes dormitories, old people's homes, nurses residences, etc.

² Poor = substandard quality material and average workmanship.
Fair = average material and workmanship (assessment manual).

buildings in Vermilion (not including mobile homes which are not rated) are in this condition.³ These buildings are concentrated in the central, south-east and south sections of the town. Blocks 2, 12, 13, 22, 25, 26 and 29 have the largest number of residences in poor condition (see Map 3.4). The west section has no buildings in poor condition. Over seventy percent of the buildings in poor condition were built prior to 1940. In fact over forty percent of all the residential structures were built before World War II. Most of the older buildings are found in and surrounding the town centre and on the south side, while many of the more recently constructed ones are found on the west and north-eastern fringes. Few new buildings have been constructed on vacant lots near the town centre.

TABLE 3.3

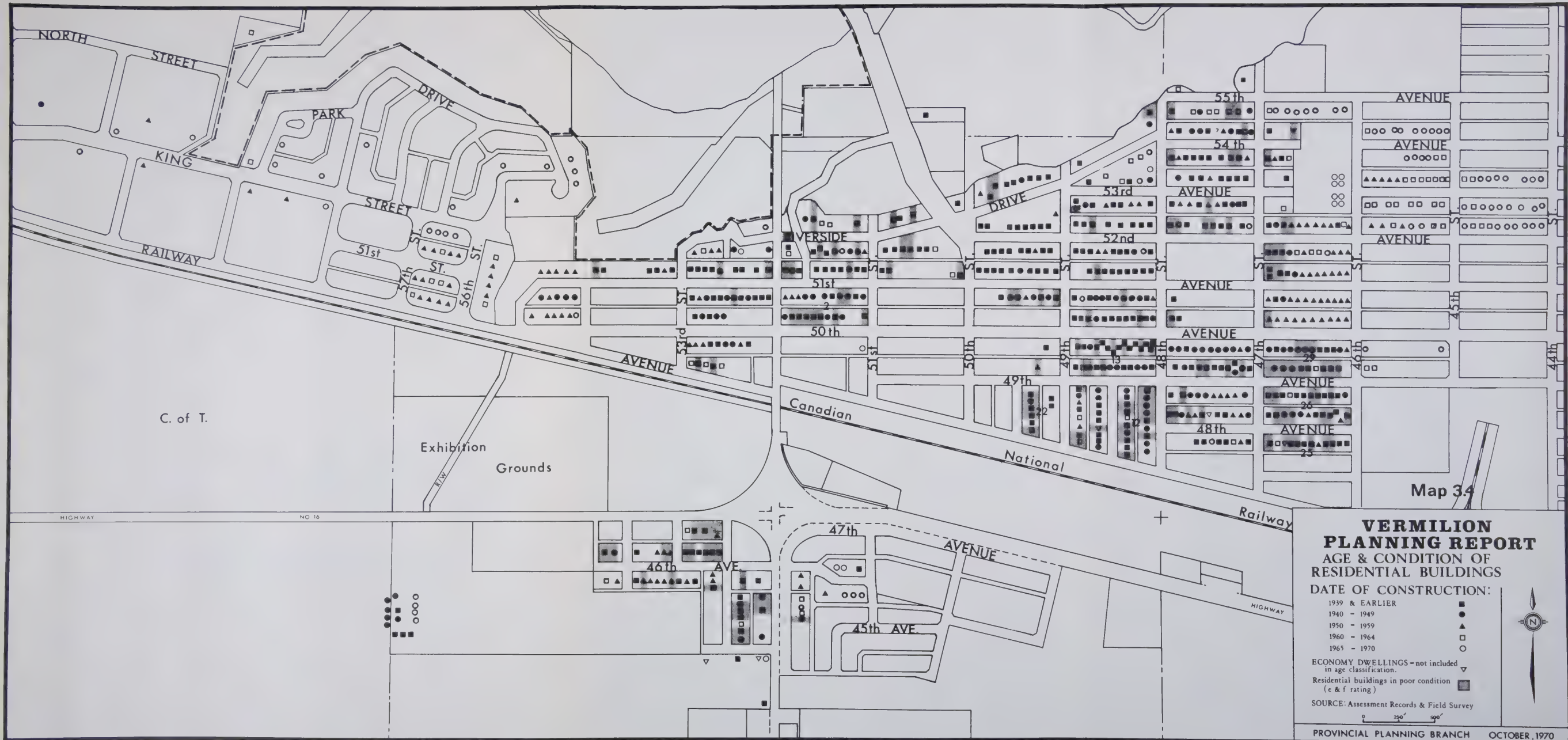
LOCAL VARIATION IN RESIDENTIAL BUILDING CONDITION

Area	Residential Buildings ⁴	Residential Buildings In Poor and Poor to Fair Condition	
Town	778	159	(20.4%)
West	46	0	(0%)
West Central	127	22	(17.3%)
Northeast	216	24	(11.1%)
Southeast	297	81	(27.2%)
South	74	24	(32.4%)
Central	16	8	(50.0%)

³ This figure is compared with those of other towns of similar size below, through the categories and method of collection may vary. These differences are noted in brackets.

Claresholm 9% (poor - survey); Taber 11.6% (poor and poor to fair - assessment data); Drayton Valley 18% (poor - survey); Fairview 20% (poor - survey); Hanna 23% (poor and poor to fair - assessment data); Grimshaw 28% (poor and very poor - survey).

⁴ Excluding Mobile Homes.



C. HOUSING DENSITY CHARACTERISTICS

Vermilion has a total of 943 dwelling units,⁵ 917 of which are occupied. Table 3.4 shows the number of dwelling units in various types of residential buildings. The total population of Vermilion is 2,949 people; 2,717 of these live in dwelling units. This means that the average household size is 2.96 persons (net) and 3.21 persons (gross). The average gross figure for the province is 3.7 persons, and for incorporated centres under 5,000 population, 3.5 persons.⁶ The relatively low Vermilion figure can be attributed to the large percentage of older people⁷ and to a number of young married couples without children. Household sizes, on the whole, are highest in the northeast and west and lowest in the central and west central areas (see Table 3.4 and Map 3.5).

⁵ A dwelling unit is a structurally separate set of living quarters with a private entrance. In this report the term refers only to a private dwelling such as a single house or apartment, and not to a collective dwelling such as a hotel or large lodging house. A residential building (or dwelling) may contain one or more dwelling units. A household consists of a person or group of persons occupying one dwelling unit. The number of households equals the number of occupied dwellings.

⁶ A sample of average household sizes for towns of comparable size are:
Barrhead 3.1, Bonnyville 3.8, Claresholm 3.8, High River 2.8,
Olds 3.3 and Whitecourt 4.0.

⁷ See Chapter II.

TABLE 3.4
TYPES OF DWELLINGS

Number of Dwelling Units In:	Total ^{8a}	Occupied	Vacant
Single Family Dwellings	788	769	19
Two Family Dwellings	76	72	4
Three Family Dwellings	27	27	0
Four Family Dwellings	24	22	2
Multi-Family Dwellings	28	27	1
Total	943	917	26

TABLE 3.5
LOCAL VARIATION IN MEAN HOUSEHOLD SIZE

Area	Population In Dwellings	Occupied Dwelling Units ^{8b}	Mean Household Size (Net)
Town	2,717	917	2.96
West	205	48	4.27
West Central	303	141	2.29
Northeast	804	228	3.52
Southeast	922	325	2.83
South	330	106	3.11
Central	132	62	2.12

^{8a} The totals in this table are larger than those in Table 3.2, since they include dwelling units found in buildings whose primary purpose is not residential, e.g. a dwelling unit found above a store.

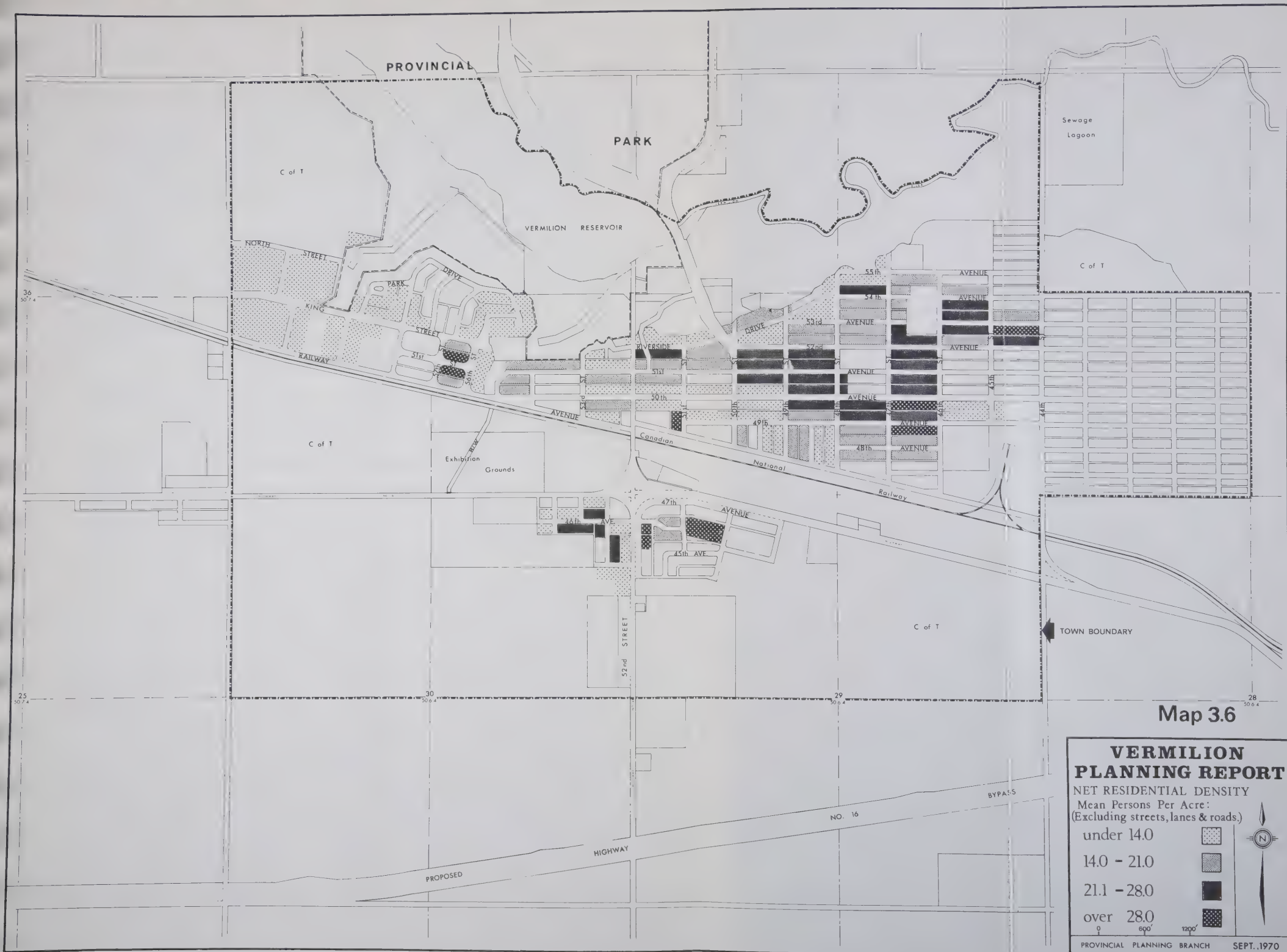
^{8b} During the week of the Town Census, October 1970.

Residential density is usually measured on a persons per acre basis and can be expressed as a gross figure (area includes streets, lanes, etc.) or a net figure (excludes roads, but still includes community facilities such as churches and schools). Table 3.5 shows the gross on an area basis, while Map 3.6 shows the net on a block by block basis. In both cases the highest densities occur in the southeast and the northeast, while the lowest are in the west and central areas. Vermilion has an overall gross density of not more than 7.3 persons per acre in the six residential areas.⁹

TABLE 3.6
LOCAL VARIATION IN RESIDENTIAL DENSITY

Area	Total Population	Area in Acres	Density (persons/acre)
Town	2,949	374.44	7.3
West	252	115.28	2.2
West Central	323	37.84	8.5
Northeast	852	58.08	14.6
Southeast	922	91.52	10.8
South	304	44.44	6.8

⁹ This figure cannot be compared to those of other towns because the area figure used (374.44) only includes the six residential areas. According to the Provincial Planning Branch land use analysis of Alberta communities, the total developed area in Vermilion is 975 acres. Using similarly derived figures, the following comparison in persons per developed acre can be made: Vermilion 3.0, Olds 6.1, Hanna 6.3, Claresholm 6.5.



Given that fifteen persons per acre is the accepted ceiling in Alberta, Vermilion generally is "well-off" in this respect. This is a good indicator that there is no overcrowding in terms of residential land use; that land, especially in the western area, is not being used to its full potential; and therefore there is room for population growth and some physical expansion within the existing residential areas.

D. SUB-STANDARD HOUSING

It is worthwhile remembering here that twenty percent of the residential structures in Vermilion have been assessed as "poor" or "poor to fair". As close as can be determined, these dwellings contain nearly 400 people or over thirteen percent of the total population. They are found almost completely in the older sections of the town. While the problem is not of serious proportions and an urban renewal scheme is not a major priority, the town should make every effort to improve the situation.

The average number of persons in each of these sub-standard units is 2.45, somewhat below the town average. There are eleven which are unoccupied and many which contain only one or two persons, often elderly people.

Many of these "sub-standard" units can no doubt be upgraded to a minimum standard with some minor repairs. Efforts should, of course, be made to encourage such repairs. Even the poorest of sub-standard housing cannot be demolished "overnight". There are, however, several methods which can be employed in an attempt to achieve this end, while at the same time, safeguarding

the interests of the residents. In terms of residential zones two classes could be adopted. Multiple family dwellings would be permitted in areas adjacent to the central business area, but would not be allowed in the fringe areas. This would serve to raise land values in the central area and encourage the present owner to sell. Since a number of the occupants are elderly, adequate senior citizen accommodation should be made available. Such strategy should be encouraged even if the formal residential zoning does not take place.

E. MOBILE HOMES AND TRAILER COURTS

The mobile home as it exists today has a two-fold purpose:

(a) it provides a transportable dwelling for migrant workers and (b) it is a form of low cost housing. The mobile home park (trailer court) has generally been considered the site on which migrant workers place their homes. However, recent statistics indicate that individual mobile homes have been occupied by the same people on the same site for an average of five years, and at times for periods of eight to ten years. The problem arising from this situation is the lack of proper sites for long term residents of mobile homes. In the majority of instances mobile home parks or trailer courts still exist in the same state as they did fifteen years ago. This is the situation which exists in the Town of Vermilion. The present mobile home park would possibly be suitable for a travel trailer type occupancy, but it is definitely not suitable for the majority of types of units now occupying it. There is inadequate spacing between mobile homes, and a definite lack of recreational space, particularly for smaller children.

The mobile home units now occupying the individual mobile home lots are far too large for the site itself. In a development of such a high density, all roads should be hardtopped or oiled to reduce dust as much as possible -- again this is not the case in the present mobile home park.

There are three alternative solutions to this problem: (a) The first and probably the hardest to implement involves encouraging the present developer to upgrade the facilities he is providing. This would involve an expansion of the park to allow a better spacing of units (especially the newer models which almost totally cover the existing sites) and dedication of more land for recreational purposes (a minimum of 100 sq. ft. per mobile home stall is required under 17-5-8 of the Department of Health Regulations respecting mobile home parks), complete with facilities. These two steps in addition to the hardtopping of common roadways would go far in an attempt to provide a residential environment for the mobile home occupants. (b) The second alternative would be for town council to encourage other private investors to consider creating another mobile home park. Should this occur, greater control over the layout of the new park could be maintained by council itself. It is doubtful that the demand for mobile home sites is sufficient to support more than one mobile home park in the town; therefore it is conceivable that the existing park may be put out of business should a higher quality park be developed. (c) The third alternative and probably the most feasible concerns the establishment of a mobile home subdivision within the town limits. This

could accomplish two things: (i) it would provide a proper residential environment for those mobile home owners who interpret the mobile home to be a form of low cost housing; (ii) it would enable the present mobile home park to reduce crowding and possibly improve its facilities. The method best applied in this case would be to provide individual lots (approximately nine in number) in Block 4, southwest of the present site, Lots 8 - 12 of dimensions 40' x 120'. Since servicing is readily available, there would be little additional cost to the town. By providing these sites, it would be possible to determine the demand for this type of development. Should the demand prove great enough, other similar sites could be provided at a later date. This type of development would, in all probability, force the owner of the existing mobile home park to upgrade his facility if he hopes to remain competitive.

Any of these possible solutions would create a similar result, that of providing a residential environment for mobile home occupants. This is a feature that is sadly lacking in the Town of Vermilion.

F. FUTURE RESIDENTIAL REQUIREMENTS

Vermilion has had, for the last decade at least, an average household size of 3.2 persons. It is assumed that this figure will remain steady.¹⁰ The method used in this report to forecast the number of dwelling units which

¹⁰ If it did change, given the age structure of the town, it would likely increase.

will be required in the future employs the population projections already mentioned and this household size figure. In the following table, population increase is compared to the number of houses built during the last decade in an attempt to verify the method.

TABLE 3.7
NEW DWELLING UNITS

	Population Increase	Net Number of New D.U.'s	Annual Average Net Number of New D.U.'s	Average Required Net Increase Based on 3.2 persons/D.U.
1961 - 66	236	78	15.6	14.8
1966 - 70	264	105	26.3	20.6

The number of dwelling units in Vermilion appears then to have increased to a greater extent than was required. More than likely, this discrepancy could be caused by a number of factors: (a) the housing construction boom in the early 1960's, (b) the tendency of a number of farmers to maintain two residences, (c) the construction, for the first time in the town's history, of four unit apartment buildings; and is possibly reflected in the 26 vacant units (October 1970). The 3.2 figure appears then to be reliable in indicating the minimum number of dwelling units which will be required.

The following table shows the future household requirements, given that the 3.2 persons per dwelling unit figure remains constant, that the population projections are reasonably accurate, and that any of the existing

dwelling units are not "lost".¹¹ The "high" projections are used since they appear to be more reliable.

TABLE 3.8
FUTURE DWELLING REQUIREMENTS

	Population	Number Of Required D.U.'s	Projected Number of D.U.'s To Be Constructed In Previous 5 Years		
			Total	In Single Family Dwellings ¹²	In Multiple Family Dwellings
1976	3,381	1,056	113	85	28
1981	3,788	1,184	128	96	32
1986	4,243	1,326	142	107	35
1991	4,748	1,484	158	119	39

Like most other Alberta agricultural centres of a comparable size, Vermilion has a high proportion of single family dwellings (83.6% of the dwelling units are found in single family structures¹³ and 93.6% of the residential structures are single family ones). Many of the two-family dwellings are, in fact, converted single family structures not originally designed to house more than one family. Although some multi-family units are now being built, Vermilion will no doubt remain a town largely of single family dwellings. The above table assumes that at least seventy-five percent of the new households in Vermilion in the next twenty years will be in the form of single family dwellings.

¹¹ This can occur as a result of fire, deterioration of sub-standard housing, public renewal and road construction and by the invasion of other uses.

¹² Based on the assumption that seventy-five percent of the dwelling units will be in single family dwellings.

¹³ Claresholm 78%; Olds 82%; Hanna 83%; Barrhead 91%.

G. RECOMMENDATIONS FOR RESIDENTIAL EXPANSION

It was pointed out earlier that the Town of Vermilion will likely grow steadily during the next twenty years. There is presently room for the construction of approximately fifteen more single family dwellings on vacant lots within the developed area of the town and another thirty in Blocks 61 and 62. These lots are or could be easily serviced and every effort should be made to make use of all of them. They would, however, only accommodate a limited portion of the town's future growth and since a number of these lots are not owned by the town, they may not be available for some time, if at all. Town and area averages are used below and throughout the section to forecast the number of additional people an area could eventually contain. It is assumed, of course, that the persons per dwelling unit figures will remain more or less constant.

Within Developed Area And Blocks 61 And 62:

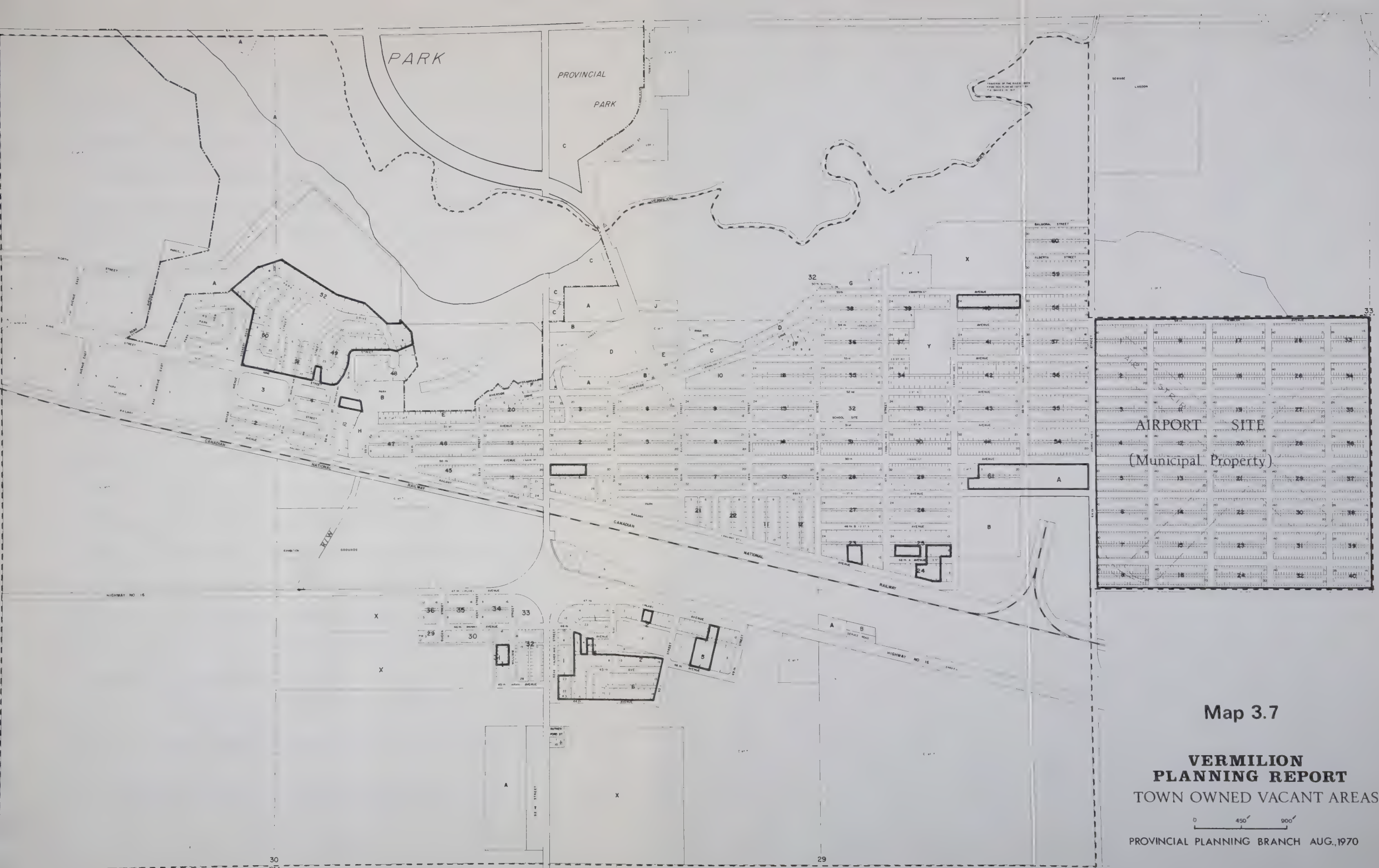
35¹⁴ D.U.'s with an average of 3.2 persons/household = 112 people

35 D.U.'s with an average of 2.8 persons/household = 98 people

Vermilion, therefore, must expand outwards in the near future.

There are several areas in which this expansion can take place. The area north of the Vermilion Hospital is the most suitable for the first major expansion. It has already been subdivided and is both partially serviced and occupied. Much of the area is owned by the town. The subdivision layout is a welcome change from the common grid pattern. The Provincial Park borders the area on three

¹⁴ This figure assumes that housing construction will not take place on all possible residential lots in the developed area.



Map 3.7

**VERMILION
PLANNING REPORT
TOWN OWNED VACANT AREAS**

0 450' 900'
PROVINCIAL PLANNING BRANCH AUG. 1970

sides and adds to its attractiveness. This area is reasonably close to the town centre and is within one-half mile of the Vermilion Intermediate School.¹⁵ This subdivision contains eighty-eight vacant lots, twenty-eight of which are serviced at the moment. If it was filled to capacity with single family dwellings, the residential density would be well under five dwelling units per acre, the acceptable low density figure.

North of Hospital:

88 D.U.'s with an average of 3.2 persons/household = 282 people

88 D.U.'s with an average of 4.3 persons/household = 379 people

The area is fertile, cleared farm land and there is no difficulty with regard to utility installation, basement excavation and road construction. A twelve inch trunk sewer has been constructed to serve this area. There will be no problem providing all lots with sanitary sewer service. Water is supplied from two lines, an eight inch and a six inch. Service lines can easily be looped throughout the subdivision. The slope of the ground is toward the river valley and therefore surface drainage does not present a problem. Drainage can be provided in conjunction with road construction. It is recommended that major residential expansion first take place in the area north of the hospital.

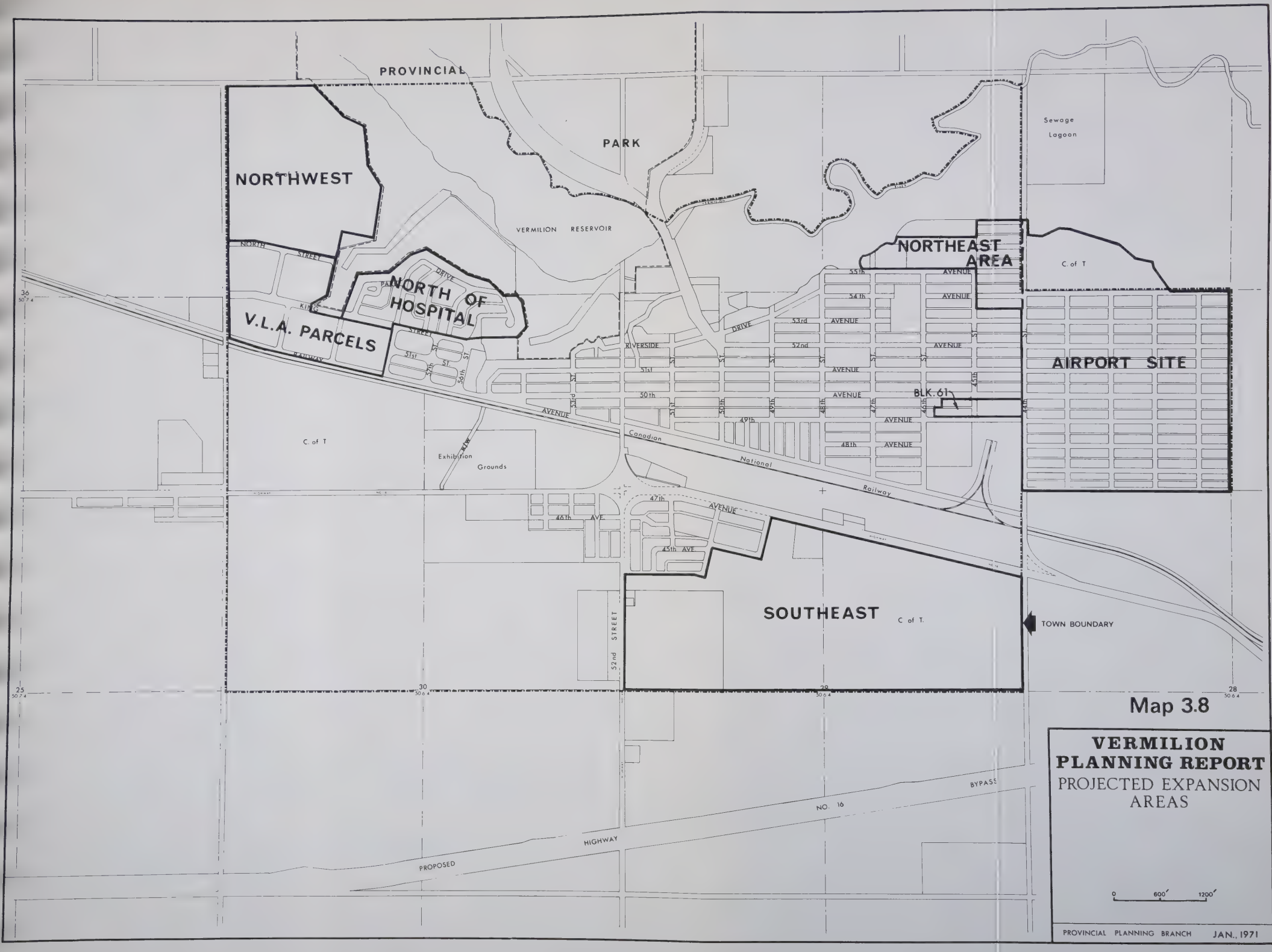
A second area recommended for future residential development is the northeast fringe. Much of the recent housing construction has taken place

¹⁵ Education requirements will be discussed in detail in a later section.

in this part of the town. It is less than one mile from the existing town commercial centre and is relatively close to a number of schools. Development in this area, however, is limited on the north side by the steep drop to the river valley and by the proximity of the sewage lagoon, and on the east by the Vermilion airstrip. The northern half of Block 40 is serviced and is owned by the town; housing construction is presently taking place there. Development of any other land in the area depends on the removal or rotation of the town-owned airstrip (see Map 3.7).

The presence of rocky, low grade pasture land in the northeast fringe will lead to higher costs for utility installation, basement excavation and road construction. There is no top soil available and it will have to be imported in order to build proper lawns. Water can be supplied to this area but the supply is inadequate for peak consumption and below a desirable fire flow. This is also the case in the developed area in the extreme northeast portion of the town. A ten inch water main running from the water tower to the northeast corner of the high school grounds and then eight inch and six inch distribution lines would solve this problem. It would also provide water for future development on the airstrip site. This area can be served with sanitary sewers using the existing trunk facilities on 47th Street. It is adjacent to and slopes toward the river valley. Therefore, surface drainage will not cause a problem.

It is apparently feasible to move the major runway (NW - SE orientation) eastward several hundred feet and possibly give it a more north-south orientation. This operation would likely not involve the purchase of more land by the town. It would, however, involve a substantial expenditure and



would eventually prove to be only a temporary measure. Such a relocated airstrip would have to be moved a second time because the town will eventually require more residential land in this area. In the interest of long term financial savings, the town should consider moving the airstrip to an area outside of the present corporate limits within the next five years. This would open both the northeast area and the airstrip site to residential development as they are needed and provide ample time for any necessary utility construction.¹⁶ In the interim the town should continue with the development of the area north of the hospital and attempt to make Blocks 61, 62 and adjacent areas in the southeast available for residential development.

Map 3.8 shows a possible layout design for the northeast area assuming the airport was removed. It could accommodate up to 294 people with a net residential density of not more than six dwelling units per acre.

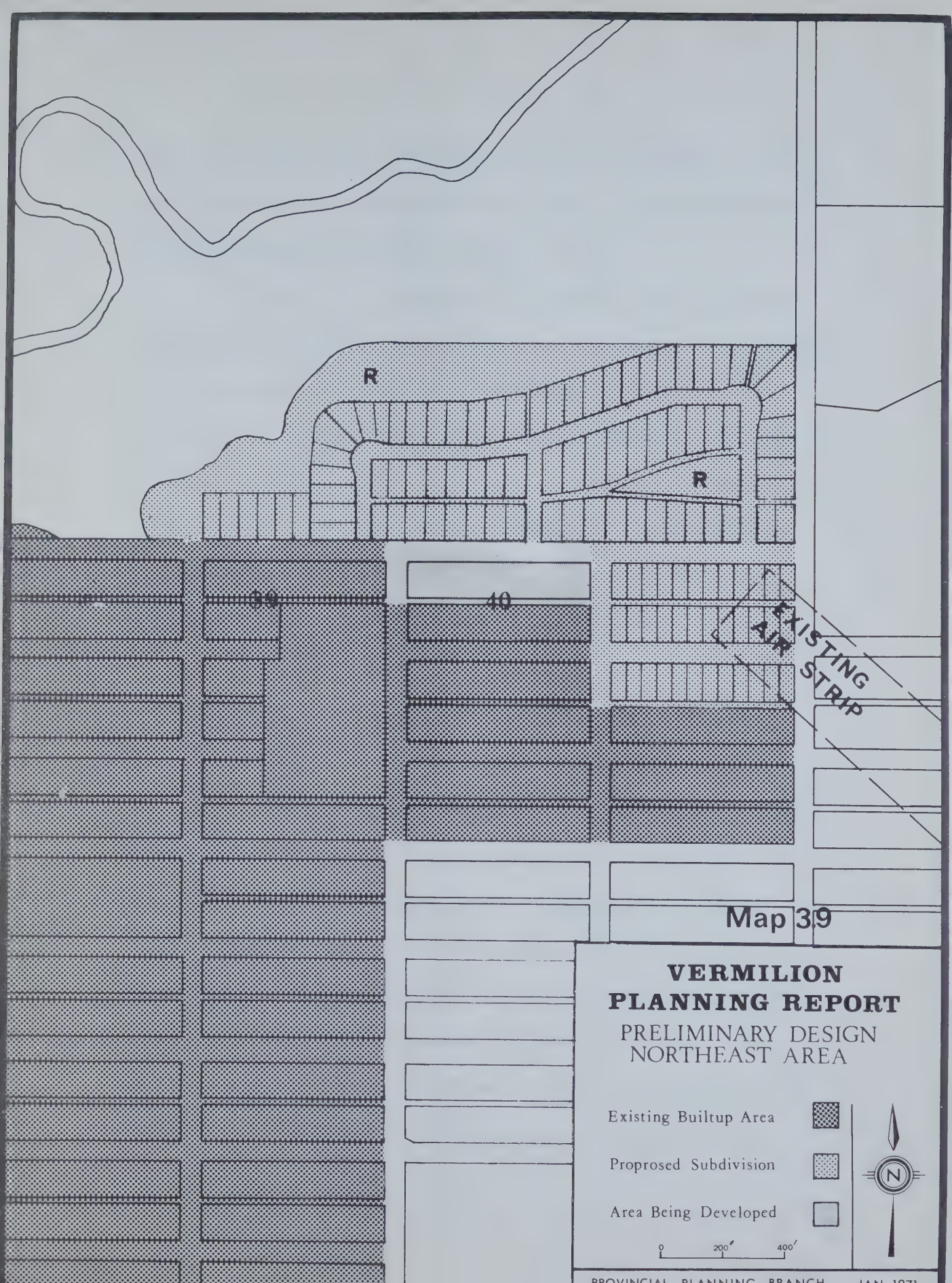
Northeast:

84 D.U.'s with an average of 3.2 persons/household = 268 people

84 D.U.'s with an average of 3.5 persons/household = 294 people

A suitable water supply for the airstrip site depends on the construction of the ten inch water main needed to serve the area north of Blocks 39 and 40 and the extreme northeast portion of the developed area. Extensive development would warrant a separate study on water supply. This area can be serviced by sanitary sewer only after a trunk sewer has been constructed on 44th

¹⁶ Similar soil conditions and problems (see above) exist throughout the northeast and airport areas.



R

R

39

40

EXISTING
AIR STRIP

Map 39

**VERMILION
PLANNING REPORT**
PRELIMINARY DESIGN
NORTHEAST AREA

Existing Builtup Area



Proposed Subdivision



Area Being Developed



0 200' 400'



Street. This should be built with the idea of eventually extending it to serve all of the airstrip site, the southeast section of town, and the industrial areas adjacent to Highway 16 and the CNR tracks.

The V.L.A. (Veteran's Land Act) parcels on the western edge of Vermilion are now three acre country residences. The area is relatively distant from the town centre and more than one-half mile from the Vermilion Intermediate School. The present owners have shown a reluctance to subdivide. This area, however, will be required, as the area north of the hospital approaches full development. A low density subdivision plan has been prepared by the Provincial Planning Branch. It allows for 102 dwelling units including the existing six. This area could contain an additional 413 people.

V.L.A. Parcels:

96 D.U.'s containing 3.2 persons/household = 307 people

96 D.U.'s containing 4.3 persons/household = 413 people

Soil conditions and problems in the V.L.A. parcels are similar to those north of the hospital. Water can be supplied by extending the system that serves the hospital area. Proper looping of lines will ensure a satisfactory supply. At the time that this area is developed, consideration should be given to extending the system into the area to the north which can be served by the same trunk sewer that serves the area north of the hospital. Storm drainage does not present a problem. Surface runoff can be directed to the river valley either straight north or by means of the adjacent ravine.

Full development of these three areas - the area north of the hospital, the northeast fringe, and the V.L.A. parcels - combined with some development in the older residential areas of the town will likely assure the town of ample space for housing until 1983 - 84.

TABLE 3.9

AREA POPULATION FORECAST

	<u>Based on Town Figures</u>	<u>Based on Local Area Figures</u>
Within developed area; incl. Blocks 61 and 62	112	98
North of hospital	285	382
Northeast	268	294
V.L.A. parcels	307	413
	972	1187

When this stage in the town's development is reached, there are several other areas in which residential development could take place. There is a large area north of the V.L.A. parcels for which a preliminary subdivision design has been prepared by the Provincial Planning Branch. The latter contains 268 lots and could accommodate over one thousand people. Servicing does not appear to be a major problem.¹⁷

17

The water supply will be sufficient when the other areas to the south and east have been developed. The lines should be looped as much as possible to ensure consistent service. Sanitary sewer service could be a slight problem. The outfall line which serves the area north of the hospital is capable of providing drainage, but there is a ravine between the two areas. A professional engineer should assess this problem before development takes place. Storm runoff can easily be directed into the river valley.

Two other areas – the present airstrip site and the undeveloped part of Section 29 in the southeast corner of the town – could also accommodate a comparable number of people. The development of any one of these three areas would provide Vermilion with adequate space for housing until after 1991 if the present growth rate continues. Each has a number of locational advantages. The ease of providing utility services may prove to be the deciding factor in determining which of the three areas is first developed.

COMMERCIAL AND INDUSTRIAL LAND

The Town of Vermilion functions as a major retail and service centre for a large densely-settled agricultural region. Consumer demand for retail and service facilities is strong enough to support forty distinct commercial functions in the town. This figure is comparable to many larger market towns in the vicinity: Lloydminster (43), St. Paul (40), Vegreville (43) and Wainwright (40).

Commercial activities in Vermilion are well confined within two distinct areas: the central business core and the highway commercial strip south of the railroad tracks (Map 4.1). Fortunately, a compact pattern of commercial development with limited mixed or incompatible land uses has resulted. It is important to sustain this commercial core as a viable functioning unit. The overall aim of this section is the provision of adequate land for commercial growth according to the needs of future market populations.

Vermilion's commercial establishments are divided into two subclasses for this report; these are defined as follows:

Commercial Business (C.B.): includes all commercial outlets which sell goods and services at the final consumer level (retail stores, personal services such as barber, beauty parlor, real estate, other offices, entertainment, hotels and motels, etc.).

Commercial Industrial (C.I.): includes such service activities as agricultural and automotive oriented sales and service, grain elevators, bulk storage, service businesses (such as repair shops, tradesmen and workshops, warehousing and wholesaling, etc.).

(Also see Map 3.2)

A. COMMERCIAL AREA

The central commercial core, as shown on Map 4.1, is a well defined and efficiently used area. Portions of Blocks 1, 2, 6, 8 and 18, and all of Blocks 4, 5, 6, 21 and 22 in Plan 6647 S form the central business core. In this area ninety percent of the establishments are of the "CB" type.

Other such outlets are located either along Highway 16, or in small isolated lots near the central area. Direct access is available from the two adjacent main residential districts, West Central and Southeast. Store frontages and streets and sidewalks are neat and well kept, however there is a definite lack of ornamental features such as street furniture and frontage landscaping. Railway Avenue, 50th and 49th Avenue are the three main east-west arterials which enter the central core. Those portions of Blocks 4, 5, 7 and 8 which face Main Street (50th Avenue) contain the highest concentration of commercial outlets. Commercial buildings in this area were the first to locate in the town and therefore utilize 30-foot lots. All other commercial lots are 50 feet or over in width. The commercial outlets along Railway Avenue are all "CI" in nature. (See Maps 3.2 and 4.1)

TABLE 4.1

CHARACTERISTICS OF COMMERCIAL ESTABLISHMENTS - 1970

	Square Feet	Sales Volume ¹	Assessment ²
Commercial Business	265,176	\$7,661,000	\$ 900,580
Commercial Industrial	700,173	754,000	450,000
Total	965,349	\$8,415,000	\$1,350,610

¹ 1969 Alberta Bureau of Statistics

² October 1969 Town Assessment, Department of Municipal Affairs

A total of 965,349 square feet of commercial buildings are situated on twenty-eight acres of land. The land upon which Commercial Business outlets are situated contains nineteen acres or 1.60 percent of the developed land (see Table 3.1, Land Use Breakdown). In terms of developed Commercial Business land in proportion to its population, Vermilion has an adequate quantity. The ratio is .63 acres per 100 persons. Other towns of a similar size are considerably lower: Taber .23 (1967); Whitecourt .27 (1967); Raymond .39 (1961) and Westlock .50 (1970). These figures do not consider the influence of the trading area.

B. TRADING AREA

In estimating the projected demand for commercial land, or in assessing the availability of commercial establishments, the population

of the trading area must be considered. Difficulty lies in determining the effective trading area population, or the percentage of trade that will be exclusively retained by Vermilion businesses within the trading area. This report assumes a figure of seventy percent. In this case, the percentage stated is an assumption based on past experience and studies of trading areas of other market centres.³ The total number of people served by the town business establishments are as follows:

Existing population of the trading area	16,700
Less: 100% of Vermilion population	<u>3,000</u>
	13,780
Percentage of people who trade in Vermilion - 70%	
Effective trading area population is	9,590
Including the town's population, the total number patronizing commercial business in Vermilion is	12,590

The figure 16,700 was determined in the 1966 Census, and for the following reasons, is used as the existing population of the trading area. As stated on page 11 of this report, there is little reason to assume that the rural section of the trading area will not continue to decrease. The extent of this trend however, for the period 1966 - 1971 is not known. It is not known if farm consolidation and the subsequent decrease in the number of farms and farm

³ For example, Grimshaw 74% and Fairview 60%

population is stabilizing or will eventually stabilize completely. Combined with this factor is the continual increase in urban populations, which acts as an offsetting force. It is assumed that the 16,700 figure is still applicable.

The following population forecast of the primary trading area is based on the projection of the urban population (page 9) and the assumption that the decline in rural population will stabilize by 1976.

TABLE 4.2
TRADING AREA POPULATION FORECAST

Year	Low Estimate	High Estimate
1971	12,590	12,590
1976	12,448	12,671
1981	12,685	13,078
1986	12,922	13,533
1991	13,159	14,038

C. PROJECTED SPACE REQUIREMENTS FOR
"COMMERCIAL BUSINESS" USE 1971 - 1991

Commercial buildings of the "Commercial Business" type provide approximately twenty-one square feet of floor space per serviced customer (total square footage ÷ trading area population). Although this type of ratio is based on arbitrary assumptions, it is nevertheless one of the better methods used in planning to estimate required space for future commercial use. The figure twenty-one is high compared to fourteen square feet, which is the average for such towns as Westlock, Peace River, Grande Prairie and Lloydminster.⁴ It

⁴ General Plan of Oyen, 1965, p. 35

may be concluded however, that Vermilion, located in a thriving and well settled mixed farming region, requires more space for its services because of a strong dependence on the surrounding area.

Using the standard twenty-one square feet per capita in the effective trading area, the following future space requirements are estimated for "CB" outlets.

TABLE 4.3
PROJECTED COMMERCIAL SPACE REQUIREMENTS

Year	Low Estimate	High Estimate
	(in square feet)	
1976	261,408	266,091
1981	266,385	274,638
1986	271,362	284,194
1991	276,339	294,798

The amount of acreage required to facilitate the projected amount of square feet (as shown in Table 4.3 above) is given as follows.⁵

TABLE 4.4
PROJECTED COMMERCIAL LAND REQUIREMENTS

Year	Low Estimate	High Estimate
	(in acres)	
1976	20.0	20.2
1981	20.3	21.0
1986	20.7	21.7
1991	21.1	22.5

⁵ Building coverage equals approximately 1/3 of the acreage.

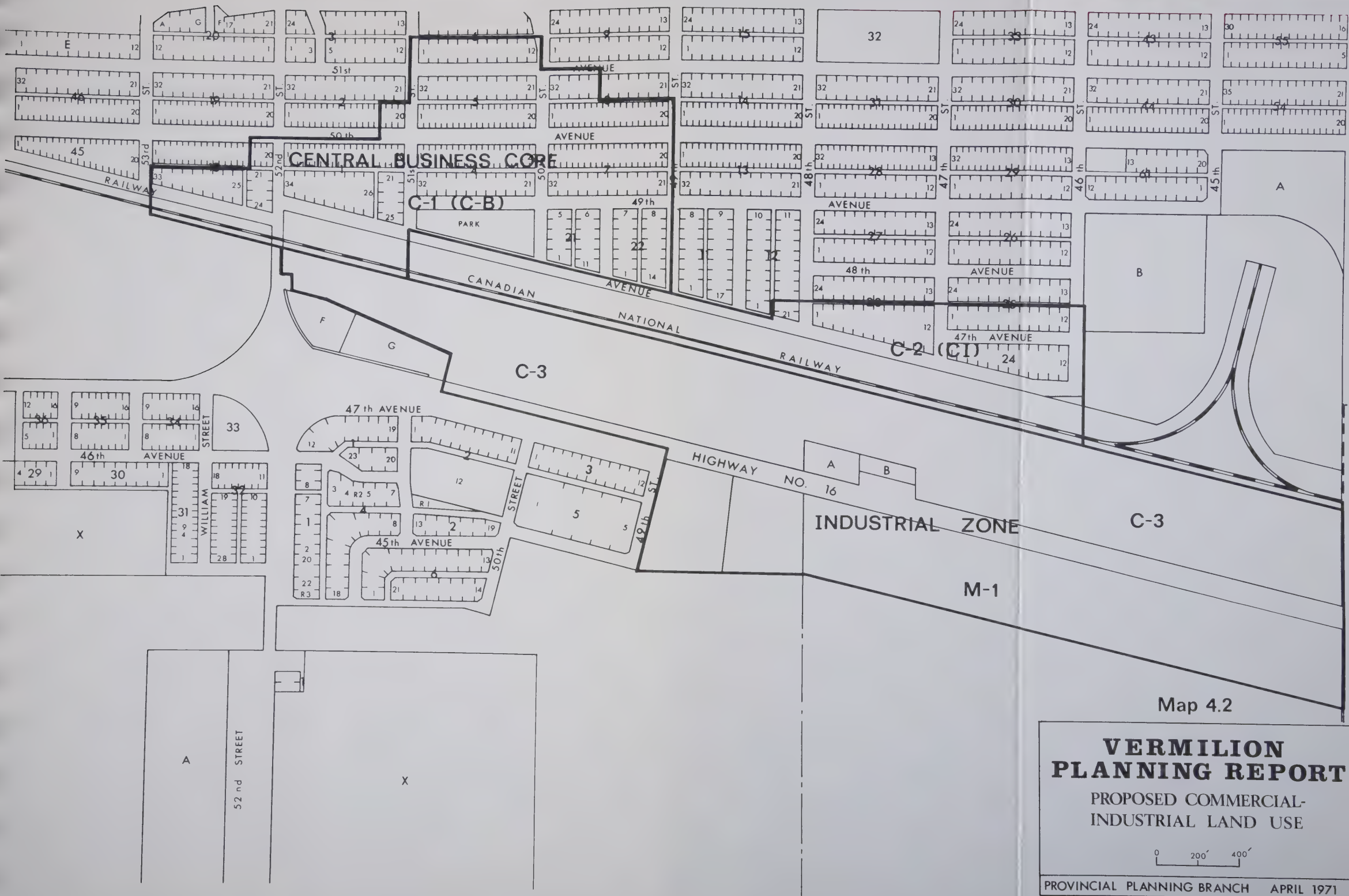
From the analysis it is expected that an additional 1,448 people will be added to the effective trading area by 1991 (high estimate). This will generate an increase of 29,622 square feet of "CB" businesses. In order to provide for the 1991 requirement of 22.5 acres, an additional 3.5 acres of "CB" land will have to be developed.

D. RECOMMENDATIONS CONCERNING CB AND CI LAND

Note: In order to conform to a more common zoning classification this report recommends that the terms CB and CI be replaced by C1 and C2 respectively. The remainder of the report, including maps, will use this suggested terminology.

A strict containment policy concerning the location of "C1" businesses is recommended for the central core as shown on Map 4.2. The retail structure should be consolidated into a single compact area. It is important that new facilities replace any old "non-conforming" or deteriorated structures and locate on vacant land in the central core. The amount of vacant land found in the "CB" area is 3.3 acres, enough to satisfy the estimated needs until 1991. An efficient central core achieves many desirable affects: it restricts land use irregularities which otherwise lower land values; it provides added revenue in the form of tax returns; and it provides for convenient and accessible shopping.

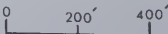
To provide adequate room for expansion and planning flexibility, it is recommended that more land be provided, other than the amount indicated by



Map 4.2

**VERMILION
PLANNING REPORT**

PROPOSED COMMERCIAL-
INDUSTRIAL LAND USE



the projections. When a residential building in the commercial district reaches economic obsolescence, it should not be reclaimed (or restored). However, sub-standard and non-conforming land uses can eventually be recovered in favor of providing for an adequate surplus of commercial land.

It would be desirable if all other non-conforming land uses could be relocated. For example, the beverage plant in Block 18, the N.A.D.P. milk processing plant in Block 6 and machinery supplies and services will be a land use deterrent during the latter stages of the planning period. A change in their location would conversely benefit these industries, as more spacious and compatible sites with room for expansion could be made available.

Vermilion's expanding linear shape could eventually create a "distance" problem between the urban consumer and retailer. As the west and northeast residential areas become occupied, the location of a number of grocery stores should be considered as a necessary development. Not more than one in each residential expansion area, however, should be allowed.

It is proposed that the zone marked "C2", Map 4.2, should develop as a site restricted to service activities as described by the CI classification, page 34. There is sufficient space for future development in this area (approximately four acres of vacant land). The adjacent CNR line provides an accessible transportation linkage. That portion of the C2 zone which is located near residential dwellings (north of Railroad Avenue) should be free of activities creating objectionable effects: noise, odor, deteriorated structures, etc. Where development is adjacent to residential land, control must prevent the reduction of residential values.

E. INDUSTRIAL LAND

Presently four separate industrial outlets are located in the town: a beverage plant, a milk processing plant (N.A.D.P.), a transit mix company (cement), and a seed cleaning plant. With the exception of the transit mix company, all are located north of the railway tracks in the commercial districts. These operations are considered manufacturing types and employ a staff of thirty-four. They occupy approximately twenty-five acres of land.

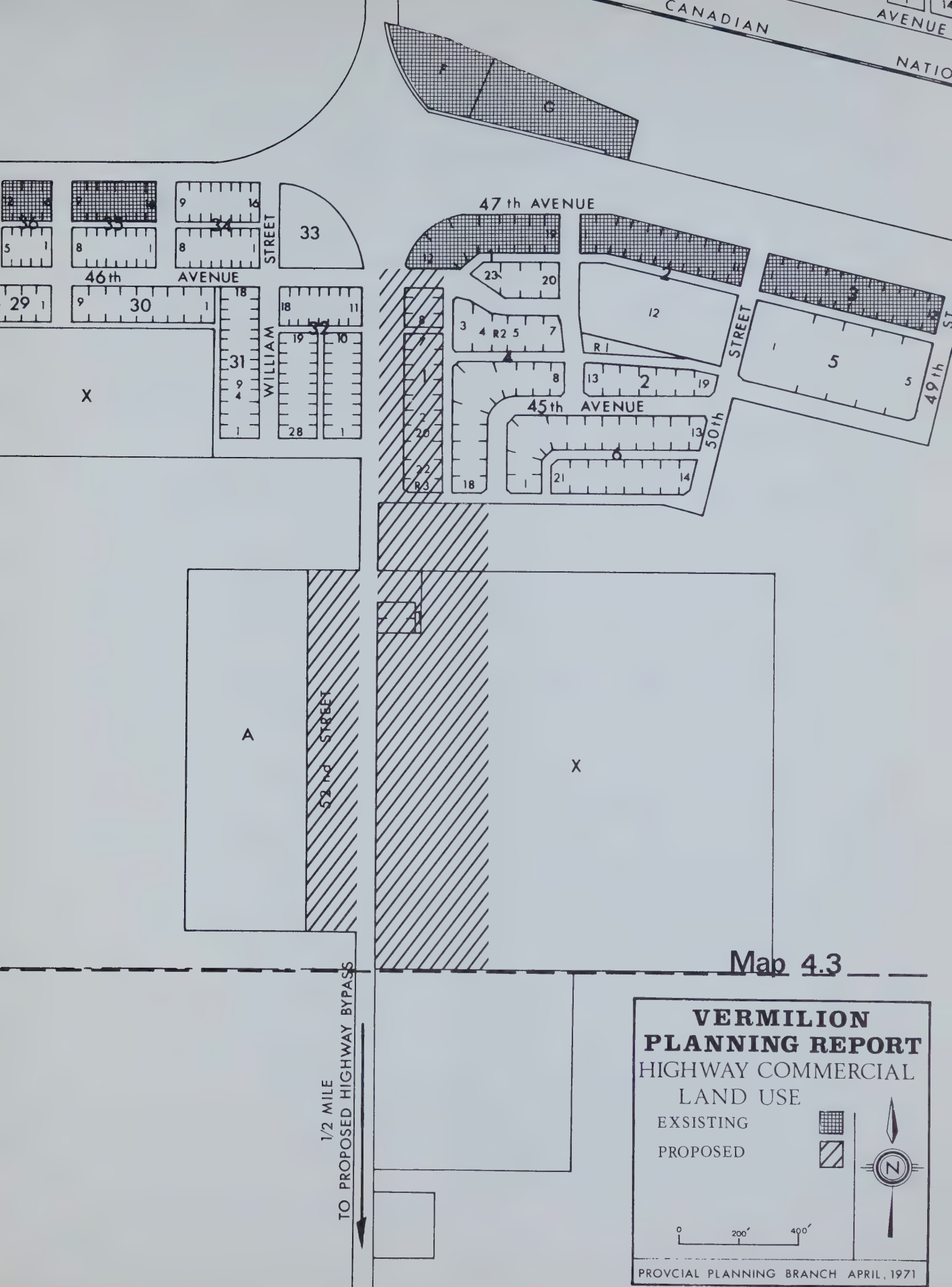
At the present time, Vermilion has no land classified under heavy industry. In order to draw industry into the town, suitably located land, with adequate size and serviceability must be provided. The only area which meets such qualification lies along Highway 16, (denoted as Industrial Zone, Map 4.2). Ideally, commercial uses such as warehousing and concealed storage which serve industrial uses should locate along the linear strip between the railway tracks and Highway 16. Land lying south of the highway and extending east to the town limits (from the eastern edge of the Highway Commercial Zone) would be well suited for heavy industrial and processing activities. This site is adjacent to the highway and lies on the leeward side of the town.

Proposals for a new slaughter house have been accepted by Council. The developers are interested in locating within the industrial area (south of the highway) previously described. This activity and similar types must be placed with restrictions based on protecting the amenities of nearby land uses.

F. HIGHWAY COMMERCIAL

Commercial activities located along Highway 16 are grouped near the main intersection leading into the town centre. Activities in this area such as motels, service stations, restaurants (including drive-ins) and construction equipment sales are more directly linked with the motoring public or require direct highway access. The demand for such facilities is difficult to forecast due to this dependence on the travelling public. The Provincial Park provides for a great deal of tourist traffic (overnight campers) and would justify the development of additional highway-orientated activities in the future.

Developments concerning the new Highway 16 south of the existing route and the resultant rise of traffic expected along Highway 41 should be given careful consideration in determining the future use of the latter route. This report discourages any further "spreading" of highway commercial activities along Highway 16. Presently a convenient compact form of highway development exists, and any new development should concentrate along Highway 41 (52nd Street) as shown on Map 4.3 and not extend beyond the present southern corporate limits.



EDUCATIONAL FACILITIES

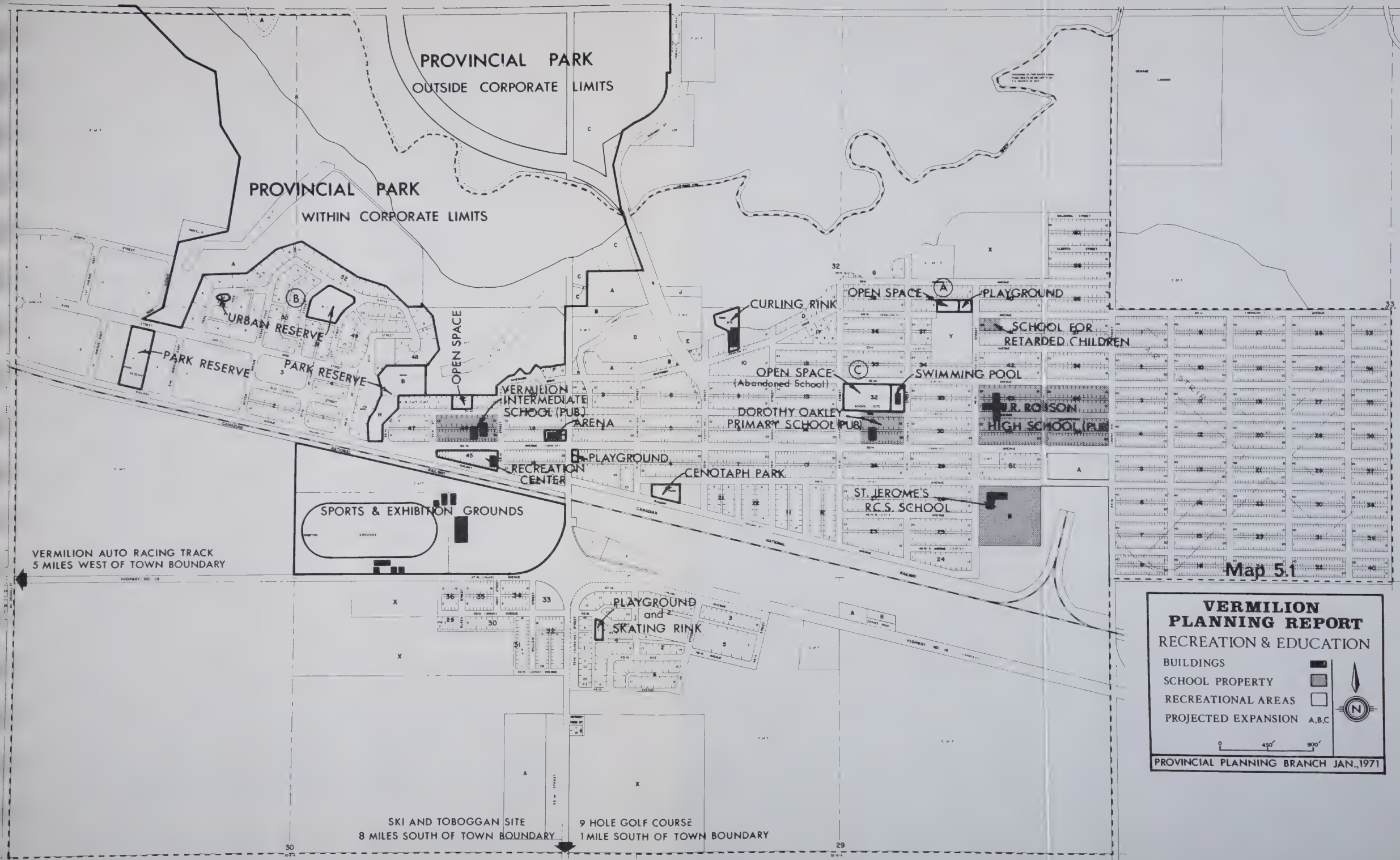
A. INTRODUCTION

The public and separate school systems in Vermilion offer elementary, junior high and senior high school grades. The present enrollment is 1,360 pupils, 629 or 46% of whom are classed as non-resident.¹ School administration falls under the County of Vermilion River #24.

There are four individual school sites, one separate school containing grades 1 - 12 and three public schools each housing one of the following groups of students: elementary (grades 1 - 2), intermediate (grades 3 - 7), or junior-senior high. The Vermilion Agricultural and Vocational College is a residential institution offering post-secondary technical level programs in Agriculture Production, Home Economics and Secretarial Training. All four schools are located on sites of either sufficient or generous sizes.

- (a) The separate school, St. Jerome's, built in 1962, contains 13 classrooms, and is located on 8.06 acres in southeast Vermilion. The school is designed for future expansion.
- (b) J. R. Robson High School recently completed a new addition (1970) and now contains 30 classrooms. The school site is on 17.70 acres in the east end of town.
- (c) Dorothy Oakley, the primary school, is also the smallest school, 6 classrooms. It occupies 3.20 acres in the residential area east of the commercial centre.

¹ Figures taken in the fall of 1970.



Map 5.1

**VERMILION
PLANNING REPORT**
RECREATION & EDUCATION

BUILDINGS	
SCHOOL PROPERTY	
RECREATIONAL AREAS	
PROJECTED EXPANSION	A, B, C

N

0 450' 900'

PROVINCIAL PLANNING BRANCH JAN., 1971

SKI AND TOBOGGAN SITE
8 MILES SOUTH OF TOWN BOUNDARY

9 HOLE GOLF COURSE
1 MILE SOUTH OF TOWN BOUNDARY

(d) The Vermilion Intermediate, located in the west, occupies

3.58 acres and contains 14 classrooms.

With the exception of the Vermilion Intermediate, all schools are located in the east part of town. Their locations are not the most advantageous in relation to the pattern of residential distribution. All elementary students residing in the west have to travel lengthy distances (upwards of one mile). Although less serious, the same holds true for junior and senior high students.

The amount of school land provided is 35.96 acres. Using Department of Education recommendations for land requirements, Vermilion presently contains enough land to accommodate approximately 2,000 students (which is the approximate estimated enrollment for the planning period of this report).² Using the same standard, the land requirements for the present time would be twenty-nine acres.

The condition and appearance of each high school is good. However, a survey taken in July 1970 of Vermilion schools indicated both the intermediate and primary schools experience physical problems. Classroom and office areas are reported to be small and cramped, storage space is lacking, grounds are poorly maintained, and heating and ventilation systems are reported to be inefficient.³ The buildings are not designed for future expansion. Therefore as student enrollment increases, either a new school or a major reconstruction

² Alberta Regulation No. 30362 (Department of Education) recommends 5 acres for the first 100 students, plus 1 acre for each 100 students thereafter for one school site.

³ Taken from information gathered from a detailed Education Questionnaire, completed in July 1970.

program would have to be considered. This problem is further emphasized in the following pages.

The following discussion dealing with student enrollment, classroom deficiencies and enrollment forecasting is necessary in order to evaluate present facilities and future projections.

B. STUDENT ENROLLMENT

Of the 1360 students attending Vermilion schools, 993 attend the public schools and 367 the separate school. The ratio of resident school population to town population, 215:1000, is lower than most other long-established centres -- Westlock 230:1000, Edmonton 230:1000, Peace River 232:1000, Grande Prairie 260:1000, Fairview 270:1000, and Cardston 290:1000 -- and indicates that the town has a relatively low proportion of young people. This can be attributed in part to an out-migration of people in the 15 - 30 age group seeking higher levels of employment. At the same time Vermilion schools have a high proportion of non-resident students. These characteristics are brought out in the following tables.

⁴ The population pyramid, page 10, shows this characteristic for the 1961 - 1970 period. It also shows a relatively high and increasing proportion of adults aged 65 and over residing in the town.

TABLE 5.1

DISTRIBUTION OF STUDENTS BY GRADES - 1970

Grade	Separate School	Public Schools	Total
1	37	71	108
2	31	77	108
3	36	71	107
4	30	72	102
5	30	85	115
6	32	79	111
7	34	82	116
8	24	85	109
9	27	76	103
10	28	112	140
11	27	86	113
12	31	97	128
Total	367	993	1,360

TABLE 5.2

RESIDENT AND NON-RESIDENT STUDENTS - SEPTEMBER 1969

School	Non-Resident	Resident	Totals
St. Jerome's	157	210	367
J. R. Robson	367	153	520
Vermilion Intermediate	125	185	310
Dorothy Oakley	47	93	140
Totals	696 (51%)	641 (49%)	1,337

The two school systems together draw fifty-one percent of their students from the surrounding rural areas. The non-resident to resident ratio is therefore 51:49. In determining future enrollment a 50:50 ratio can be used. This will not change greatly during the planning period. The surrounding rural area will not likely increase in population and any potential decline in non-resident enrollment (due to socio-economic factors) will be offset by further centralization trends toward Vermilion schools.⁵ There will also be a decreasing proportion of school age population in the town.

Past enrollment rates have indicated an increasing tendency towards rural enrollment beyond that which is supplied by normal town population increase. Between the years 1964 and 1969 an increase of twenty-four percent is noted as follows:

TABLE 5.3
SCHOOL ENROLLMENT

Year	Total School Enrollment	Per Cent Increase
1964	1,073	0
1965	1,055	0
1966	1,071	0
1967	1,138	0
1968	1,196	0
1969	1,337	24.0

⁵ The discussion on Trading Area (population) on page 10 indicated a 20% decrease over a 15 year period (1951 - 66) in rural population.

C. CLASSROOM FACILITIES

In providing for future educational facilities, it is necessary to examine the flexibility of present accommodation practices. Using the 1970 enrollment figure, 1,360, and if an average of twenty-seven students per classroom is applied, then fifty classrooms are needed to accommodate all students in Vermilion.⁶ The present availability is fifty-one classrooms, however some overcrowding conditions exist in all but one school. The following chart, showing the distribution of students per classroom, further illustrates the problem.

TABLE 5.4
CLASSROOM CHARACTERISTICS

	No. of Students	No. of Classrooms	Students Per Classroom	Classroom Surplus or Deficit ⁷
Grades 1 to 6				
Public	455	18	25.2	1 surplus classroom
Separate	196	7	28.0	a few students surplus
Grades 7 to 9				
Public	243	10	24.3	1 surplus classroom
Separate	85	3	28.3	a few students deficit
Grades 10 to 12				
Public	295	10	29.5	a 2 classroom deficit
Separate	86	3	28.5	a few students deficit
Total	1,360	51	27.3 average	

⁶ Projections by various planning agencies are based on either 25 or 30 students per classroom, taken from Table 5.4, this report assumes a total school average of 27 students per classroom.

⁷ Based on 27 students per classroom.

The need for additional classroom space is not urgent, however within a few years there will be a classroom deficiency, particularly in the public schools in Vermilion. The two groups, grades 1 to 6 and 7 to 9, can accommodate only a few additional students before a deficit occurs. Both the high school systems appear to be operating at complete capacity with some overcrowding existing. Some relief, however, is indicated as St. Jerome's plans to include the following facilities: two classrooms (54 students), home economics room and one auxillary room. As previously mentioned, the structural condition of both the intermediate and primary schools is considered serious by local school authorities. Regular classrooms are also being used as physical education rooms and music rooms. There is no provision for audio visual rooms or sick rooms for the two schools. The town should be provided with new or reconstructed facilities for primary and intermediate students.

D. PROJECTED STUDENT ENROLLMENT

Various practices are used in determining the future number of children of school age. Because of Vermilion's consistent growth pattern, the method utilizing the ratio of school population to total population appears to be satisfactory. The proportion of resident students per 1,000 population is estimated for each forecasted year. The enrollment forecast is based on the 20 year planning period to coincide with the population projection on page 9.⁸

⁸ Fall, 1970

The estimated school population for residential and non-residential students for both school systems are provided in the following table.⁹ The low and high estimates are based on the low and high population projections.

TABLE 5.5
ESTIMATED SCHOOL POPULATIONS
(Low Projection)

Year	PUBLIC		SEPARATE		TOTAL
	Residents	Non-Residents	Residents	Non-Residents	Both Systems
1976	454	572	224	161	1,411
1981	488	615	241	173	1,517
1986	523	658	257	185	1,623
1991	557	699	274	197	1,727

TABLE 5.6
ESTIMATED SCHOOL POPULATIONS
(High Projection)

Year	PUBLIC		SEPARATE		TOTAL
	Residents	Non-Residents	Residents	Non-Residents	Both Systems
1976	487	612	240	172	1,511
1981	533	686	262	193	1,674
1986	611	768	301	216	1,896
1991	684	859	336	242	2,121

⁹ The 44:56 ratio of residents to non-residents is used as the base separating enrollment for public schools and 55:45 for separate schools. The combined ratio is approximately 50:50 as discussed on page 47 of this section.

A second required projection separates the combined resident and non-resident estimates into grade divisions. The distribution of students according to grades is as follows:¹⁰

Elementary	1 - 6	48%	(651)
Junior High	7 - 9	24%	(328)
Senior High	10 - 12	28%	(381)

By applying the projected enrollment figures in Tables 5.5 and 5.6 to the existing distribution of students according to grades, the following projection for school enrollment is arrived at.

TABLE 5.7

ESTIMATED SEPARATE SCHOOL ENROLLMENT BY GRADES

Year	Elementary 1 - 6		Junior High 7 - 9		Senior High 10 - 12		TOTAL	
	Low	High	Low	High	Low	High	Low	High
1976	203	218	81	91	87	93	371	402
1981	218	241	91	101	93	103	402	445
1986	234	273	97	114	100	117	431	504
1991	249	305	104	127	106	130	459	562

¹⁰ Percentage calculated from Table 5.1

TABLE 5.8

ESTIMATED PUBLIC SCHOOL ENROLLMENT BY GRADES

Year	Elementary 1 - 6		Junior High 7 - 9		Senior High 10 - 12		TOTAL	
	Low	High	Low	High	Low	High	Low	High
1976	474	507	258	272	308	330	1,040	1,109
1981	510	563	273	301	331	366	1,114	1,230
1986	545	637	292	341	353	414	1,191	1,392
1991	580	713	310	382	378	463	1,268	1,558

A final projection in this section deals with classroom demands .

The estimates assume a maximum number of twenty-seven students per classroom .

TABLE 5.9

CLASSROOM PROJECTION - SEPARATE SCHOOLS

Year	Elementary 1 - 6		Junior High 7 - 9		Senior High 10 - 12		TOTAL	
	Low	High	Low	High	Low	High	Low	High
1976	7.50	8.00	3.00	3.00	3.00	3.50	13.50	14.50
1981	8.00	8.75	3.50	3.75	3.50	4.00	15.00	16.50
1986	8.50	10.00	3.50	4.00	3.75	4.50	15.50	18.50
1991	9.00	11.00	3.75	4.50	4.00	5.00	17.00	19.50

TABLE 5.10

CLASSROOM PROJECTION - PUBLIC SCHOOLS

Year	Elementary 1 - 6		Junior High 7 - 9		Senior High 10 - 12		TOTAL	
	Low	High	Low	High	Low	High	Low	High
1976	17.50	19.00	9.50	10.00	11.50	12.00	38.50	41.00
1981	19.00	21.00	10.00	11.00	12.50	13.50	41.50	45.50
1986	20.00	23.50	11.00	12.50	13.00	15.50	44.00	51.50
1991	21.50	26.00	11.50	14.00	14.00	17.00	47.00	57.00

E. CONCLUSIONS

From the analysis it is expected that the school system will enroll an additional 761 students (high estimate) by 1991. The existing system can accommodate approximately 100 new students, given that the new classrooms planned for St. Jerome's are constructed within the next three years.

The separate school will have sufficient space until 1976. Following this period approximately 166 additional students will require accommodations (6 classrooms) by the end of the planning period.

The public school system will have sufficient space until 1972 for grades 1 and 2 and 7 to 12 with some reorganization of classroom allocation. Even though facilities are inadequate, the problem is less critical for grades 3 to 6 presently housed in the intermediate school. By 1976 the public schools will have to provide for 63 additional students. Following this period approximately 444 additional students will require accommodations (15 classrooms).

F. RECOMMENDATIONS

New or reconstructed primary grade facilities should be provided at the site now occupied by the Dorothy Oakley school. It is proposed that such development take place between 1972 - 1976. The site is centrally located within Vermilion's largest residential area. A school large enough to meet estimated demand up to 1991 (11 classrooms) could feasibly locate on the existing 3.20 acres.

If long term growth trends remain constant and development of the town takes place in the sequence outlined in this report, then an additional primary school would be necessary. Choosing a school location in the opposite end of town (west) near the hospital site, should be considered when residential growth takes place. The present situation which forces many students to travel across town to school is undesirable.

It is recommended that a critical re-examination of the functioning capabilities of the Vermilion Intermediate take place. The school reports that presently sub-standard physical problems exist (as discussed on page 44). By 1976 the school will face a classroom shortage, therefore education authorities should now attempt a decision with regards to upgrading facilities. In terms of proximity to the existing and proposed neighbourhood plan (of the report), the school site is ideal. As residential development expands west, the school will absorb a larger proportion of students at the intermediate level.

When the need occurs for expanding the public and separate high schools, adequate space is available at their present sites. J. R. Robson,

which enrolls a larger percentage of students, may also have the benefit of vacant land now occupied by the airstrip. Outside of a new site for elementary students, no additional school land is necessary to house a potential 2,121 students by 1991.

The town should not permit encroachment of other types of objectionable development (large-volume retail, heavy or light industry, etc.) near or within lands presently used for education facilities. The town should not permit any structural development, other than for recreational purposes, on vacant lands immediately adjacent to school sites. This would ensure all possibilities for school expansion.

PARK AND RECREATION FACILITIES

A town's population must be provided with at least the minimum amount of space and facilities required for recreational pursuits. Unlike large metropolitan areas, participation in smaller towns often takes place in limited facilities; the basic ones being a curling rink, arena and community hall. In most cases such structures are highly user-oriented. The Department of Industry and Tourism estimates that eighty-five percent of the Vermilion population participates in recreational activities.¹ The provision of adequate facilities requires a careful analysis of population needs in relation to existing services. The cost of acquiring land or constructing new facilities may be offset only after many years of operation.

The Town of Vermilion is in a favorable position. It has more than an adequate quantity of space available for expansion as well as a good variety of developed facilities. Table 6.1 provides a full inventory of both parks and indoor and outdoor sports facilities and their respective site sizes. The ten member Recreation Commission established by the town supplies Vermilion with a full time Recreation Director and a four man maintenance crew.

The distribution of park and recreational facilities is indicated on Map 5.1. The sports and exhibition grounds, highlighted by the modern indoor stadium, stands as one of the best equipped authentic complexes in east-central Alberta. The area can easily accommodate large crowds. Events

¹ Department of Industry and Tourism, "Survey of Vermilion", 1970

TABLE 6.1

PARKS AND RECREATION INVENTORY
(Acreages and Facilities)

	<u>Activity</u>	<u>Acreages</u>
I.	RECREATIONAL FACILITIES (Developed Sites for Organized Sports)	
A.	Vermilion Sports and Exhibition Grounds	58.42
	- Horse Racing Track 0.5 miles	
	- Track Facilities, Stables and Paddock Area	
	- Capacity of Stands 1,500	
	- 3 Baseball Diamonds	
	- 2 Fastball Diamonds	
	- Soccer Field	
	- Indoor Stadium	
	- Indoor Artificial Ice Rink	
	- Rodeo Facilities	
	- Concessions	
	- Capacity 2,500	
B.	Curling Rink	.43
	- 6 Sheets	
C.	Vermilion Arena (1928)	.59
	- Indoor Ice Rink	
	- Concession	
	- Capacity 1,200	
D.	Vermilion Swimming Pool (1967)	.60
	- Heated Outdoor Pool and Facilities	
	2,100 square feet	
	- Wading Pool	
E.	Vermilion Recreation Centre	.87
	- Recreation Director's Office	
	- Rifle Range	
	- Hall 5,280 square feet	
	- Capacity 660 - Stage	
	- Teen Club	
	Total	60.91
		cont'd...

<u>Activity</u>		<u>Acreages</u>
<u>Does not include:-</u>		
a) 9-hole golf course one mile south		
b) Vermilion Ski and Toboggan Club 8 miles south (2 slopes, 2 tow ropes)		
c) Vermilion Auto Racing Track 5 miles west (1.5 mile gravel track, seating capacity 200)		
II. PLAYGROUNDS		
A. Forester's Playground (N.E.) Children's Play Lot		.38
B. Elk's Playground (Central)		.06
C. Kinettes Play Lot (South)		.30
	Total	<u>.74</u>
III. PARKS AND URBAN RESERVE (Open Space)		
A. Urban Reserve Parcels R-1, R-5, in 5706 N.W.		2.54
B. Park Reserve Parcel P		2.93
C. Cenotaph (Park) Adjacent R/R		1.03
	Total	<u>6.50</u>
<u>Does not include:-</u>		
Provincial Park 1,929.33 acres or school yards		

such as baseball, fastball, soccer, indoor ice activities, rodeos, track and field and even horse racing are undertaken throughout the year. Separated from the main grounds are four additional structures; the curling rink, the older Vermilion arena, the new outdoor swimming pool (heated) and the Vermilion Recreation Centre which accommodates youth clubs, gymnastics, rifle range and seminar activities.

A total of 7.24 acres of park, playgrounds and urban reserve exist. The three developed playgrounds: Forester's (northeast), Elks (central) and the Kinettes (south) are all within the main residential areas. The Cenotaph, located near the CNR station, is the only landscaped ornamental park in town. The proximity of the Provincial Park, 116 acres of which lies within the town's corporate limits, gives Vermilion a unique advantage. Residents have easy access to a number of high quality recreation facilities for swimming, beach activities, camping and picnicking.

Approximately five percent of the developed land, or 67.41 acres, in Vermilion is devoted to parks and recreation (including playgrounds and sports-fields). This 2.4 acres per 100 population is far more than the standard requirements for a community the size of Vermilion. These figures do not include additional space and facilities provided by the school sites, golf course, Vermilion ski and toboggan area, auto racing track and the 1,929.33 acres of Provincial Park lying within and adjacent to the town's corporate limits (see Map 5.1). The total park and recreational land, including the 67.41 acres under

town jurisdiction, is nearly 190 acres or 6 acres per 100 people.

For the purpose of establishing present and future requirements, the standards discussed are based on this ratio of acreage of recreation and park land to population. For example, the Town of Fairview in 1967 showed a lack of recreation land, .38 acres per 100. Taber in 1966 had 3.2 acres per 100. Both the U.S. National Parks Service and the U.S. Recreation Association conservatively recommend one acre per 100 population.² In a report by J. Spender, the City of Edmonton recommends one acre per 50 population including school sites. Vermilion can claim 1.7 acres per 50 population (adding the 67.41 acres to the 34.74 acres of school), or 42.15 acres over the theoretically required amount.

It is estimated that enough space exists to facilitate expansion and new construction until a population of 6,000 is reached. However, this report does not recommend any expansion or new construction for the next five years, at which time (1976) a re-assessment of population needs should be undertaken.

RECOMMENDATIONS

The presently available park and recreational land must be completely utilized before additional property is sought. In its efforts to preserve existing recreation areas the town should not permit encroachment by other types of development.

² The Wisconsin Planning Commission and the Outdoor Recreation Space Standards respectively recommend one acre per 200 and one acre per 500 population.

Co-operation should continue between school and recreation authorities inasmuch as school facilities (both indoor and outdoor) are used for town recreation programs outside of school hours. By eliminating a duplication of facilities, the town would subsequently realize a saving in funds.

Vermilion has a shortage of developed play lots (present total .74 acres) and landscaped parks. Due to an abundance of other types of facilities in school yards, the problem is at the moment not critical. With the complete occupancy of residential lots in the new west and northeast subdivisions it is recommended: (a) that the Forester's Play Lot (marked "A", Map 5.1) expand into the adjacent .56 acres of open space, and (b) that a portion of the urban reserve site (approximately 2.5 acres) marked "B", be developed into a playground site.

The parcel marked "C", the abandoned school site, is ideally located within walking distance of three-quarters of the town's population. It is recommended that the town begin preliminary work with the ultimate aim of changing this area into a town park. The new swimming pool and wading area has provided a great deal of momentum in this direction. A combination of walkways, lawns, park benches and shrubs would provide a pleasant change in the neighbourhood. The landscaping could take place over several years as funds become available.

Final recommendations, though not to be considered as major proposals, are: (a) to build a tennis court on either the grounds west of the

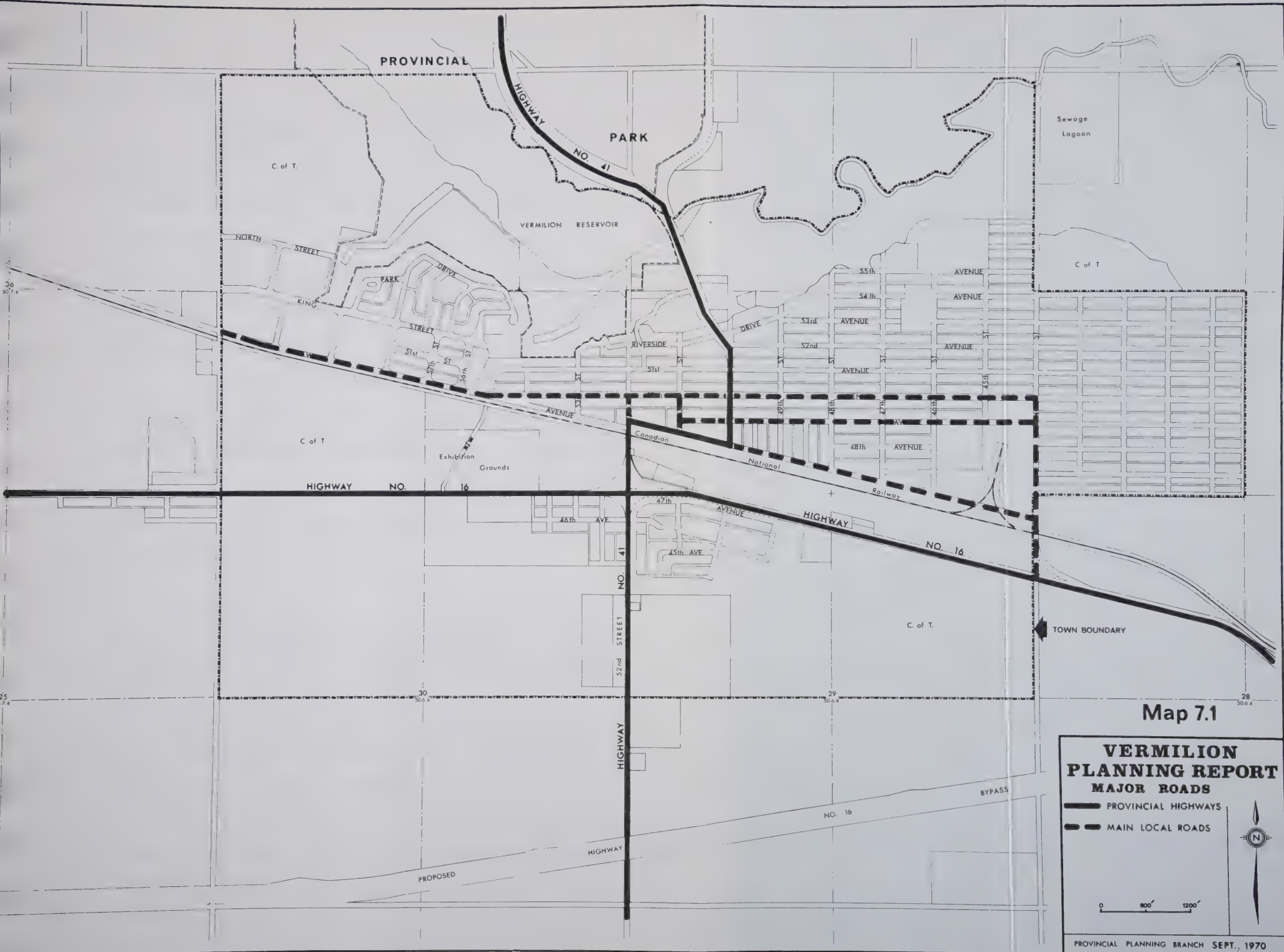
Recreation Centre or the Exhibition grounds; (b) to completely remove the old curling rink from the residential area along Riverside Drive, in the interest of residential privacy and land use cohesion, and (c) at such a time when the Vermilion Arena reaches complete obsolescence, it should not be replaced on this site. This area should eventually become a landscaped neighbourhood park and playground.

ROADS, STREETS AND TRAFFIC

A. ROADWAY SYSTEM

The Town of Vermilion is located at the junction of two provincial highways. Highway 41 runs north and south through the town centre and Highway 16 runs east and west south of the CNR tracks. Access to the town is provided by these two highways, but a proposed bypass will run approximately one-half mile south of the corporate limits. When this is completed Highway 41 will provide the main access route into the town. This will remove the majority of the traffic from the existing Highway 16 and eliminate traffic congestion at the present intersection of the two highways. The intersection is now a right angle one with four two-way cut-offs. This should be changed to a simple right angle intersection to reduce the number of conflict points.

With the exception of the new subdivision north of the hospital the street system is based on a grid (see Map 7.1). The Vermilion River Valley and the CNR tracks interrupt the grid pattern preventing all of the streets from attracting through traffic. The north-south artery is Highway 41 while the east-west arteries are 50th, 49th and Railway Avenues. As the town grows some effort should be made to keep these streets as arteries and discourage through traffic on all other streets. It is recommended that curvilinear subdivision design be used for all new residential areas. This type of design has been used in the area north of the hospital.



Map 7.1

**VERMILION
PLANNING REPORT
MAJOR ROADS**

- PROVINCIAL HIGHWAYS
- MAIN LOCAL ROADS

0 800' 1200'



B. ROAD SURFACING

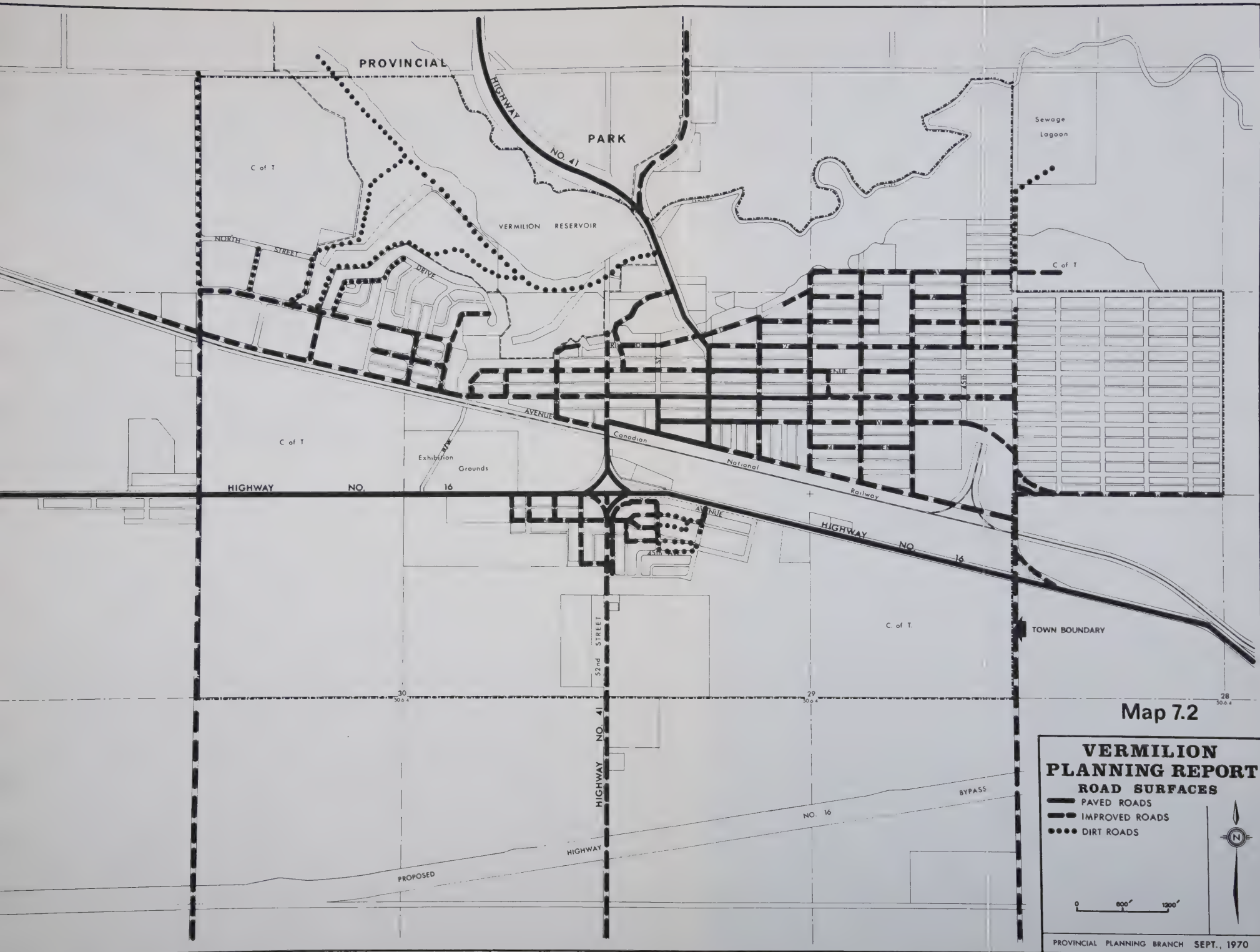
The major streets in the central area as well as the provincial highways are paved (see Map 7.2). The greatest portion of the remainder of the streets within the town are graveled and some of these are treated with oil in order to control the dust. Many of the rarely used roads such as the one to the sewage disposal area are not graveled. The majority of subdivided areas have curb and gutter frontages. These general conditions can be improved in conjunction with the installation of additional storm sewers.

It is recommended that the town follow the suggestions outlined in a Report on the Overall Drainage Survey for the Town of Vermilion, prepared by Associated Engineering Services Limited regarding a staged paving program. The town should strive to pave as many streets as possible in order to improve the general appearance of the town as well as providing better street drainage and aiding in dust control.

C. TRAFFIC AND PARKING

In Vermilion there is generally no problem with traffic or parking. There are two intersections that are congested during peak traffic flows: 50th Street and 50th Avenue and 51st Street and Railway Avenue.

There are stop signs on 50th Street at 51st Avenue; the traffic is not yet heavy enough to warrant four-way stop signs or traffic lights. The intersection at 51st Street and Railway Avenue deserves more consideration. Traffic from 49th Avenue is allowed to enter Railway Avenue directly; a potentially



dangerous situation. The Cenotaph Park should be extended so that 49th Avenue has a "T" intersection at 51st Street. This would make right-of-way inherent and better channelize the approach to Railway Avenue. The west end of the park block could then be returned to park use or be made into a parking lot.

There is sufficient parking space in the central area. Angle parking is allowed in a number of areas in this district. If, in the future, traffic becomes congested, parallel parking should be initiated. This would decrease the number of parking stalls by about fifty percent but it would better facilitate traffic movement. If it is desirable to retain the present 'ease of parking', the town should ensure that space for off-street parking is available in the central area.

UTILITIES AND SERVICES

A. WATER TREATMENT AND DISTRIBUTION SYSTEM

1. Supply

Water is supplied to the Town of Vermilion from three wells drilled into the same aquifer near the Vermilion River. The rated capacity of the three wells is about 700 g.p.m. (gallons per minute). This is adequate for the planning period. At present, the wells are pumping far less than capacity. As the demand increases, the pumping rate can be increased. Pump capacity should be taken into account when new pumps are installed.

2. Treatment

Water treatment consists of (a) gas injected chlorine, and (b) iron removal by pressure aeration and filtration. The iron content of the raw water is in the range of 3 to 3.5 p.p.m. (parts per million) while the iron content in the treated water ranges from 0.1 to 0.3 p.p.m. depending on the location within the town. The acceptable standard for a municipal water supply is a maximum iron content of 0.3 p.p.m. The iron removal equipment is capable of pumping at a rate of 400 g.p.m. The water treatment plant should be capable of supplying enough water for a peak day. At present per capita consumption the plant has the capacity to serve a population of 3,840 or approximately until the year 1982 (if present trends

continue). If the daily per capita consumption increases, which is likely (see next section), this date will have to be changed accordingly.

3. Consumption

In 1970 the Town of Vermilion consumed an average of 221,000 Imperial gallons per day. This figure yields a per capita per day consumption of 75 gallons. The ratio of 2:1 for Maximum Daily Demand to Average Annual Daily Demand yields a Maximum Daily Demand of 442,000 Imperial gallons. It can be expected that the daily per capita consumption will increase to between 85 and 100 gallons with more commercial and industrial users being connected to the system and domestic consumers using more automatic washing machines, dish washers, etc. When the population reaches 4,748, the projected 1991 figure (see Population Chapter), the average daily consumption is estimated to be at least 403,000 gallons with the maximum daily consumption being 806,000 gallons.

4. Distribution

The treated water is pumped from the treatment plant to a ground storage reservoir near 50th Street and 51st Avenue. From there the water is pumped through the distribution system (see Map 8.1) and into an elevated storage tank. The tank is capable of supplying water under sufficient pressure to the new subdivision west of 55th Street, but the system will have to be upgraded in order to adequately serve any new development to the east. A report by Stanley, Grimble, Roblin Ltd. (1964) proposed a water-

main system that would improve the water supply to the northeast section of town.

5. Storage

The town has a treated water storage capacity of 150,000 gallons. It is recommended that the town have sufficient storage for fire fighting in addition to one peak day's consumption. The Canadian Underwriters' Association (C.U.A.) recommends that a community of 2,949 have sufficient fire storage for a fire flow of 1,400 gallons per minute for six hours. This yields a total of 518,400 gallons. Added to a peak day's consumption this yields a recommended storage of 960,400 gallons. This is far greater than the actual storage of 150,000 gallons. By 1991 it can be expected that the recommended storage will be just over 1.6 million gallons. It is possible to supplement this storage by increased pumping or stand-by pumps.

6. Conclusions and Recommendations

The water supply and treatment are adequate for the next ten years. The distribution system is inadequate in certain areas and the storage capacity is totally inadequate.

It is recommended that:

1. a Professional Engineer be consulted to: (a) immediately assess water storage facilities, and (b) prepare a report on the distribution system before any large areas are opened for residential expansion;

2. some effort is made to improve the water supply to the northeast section of the town; and
3. the iron removal equipment be evaluated for capacity and effectiveness within the next ten years .

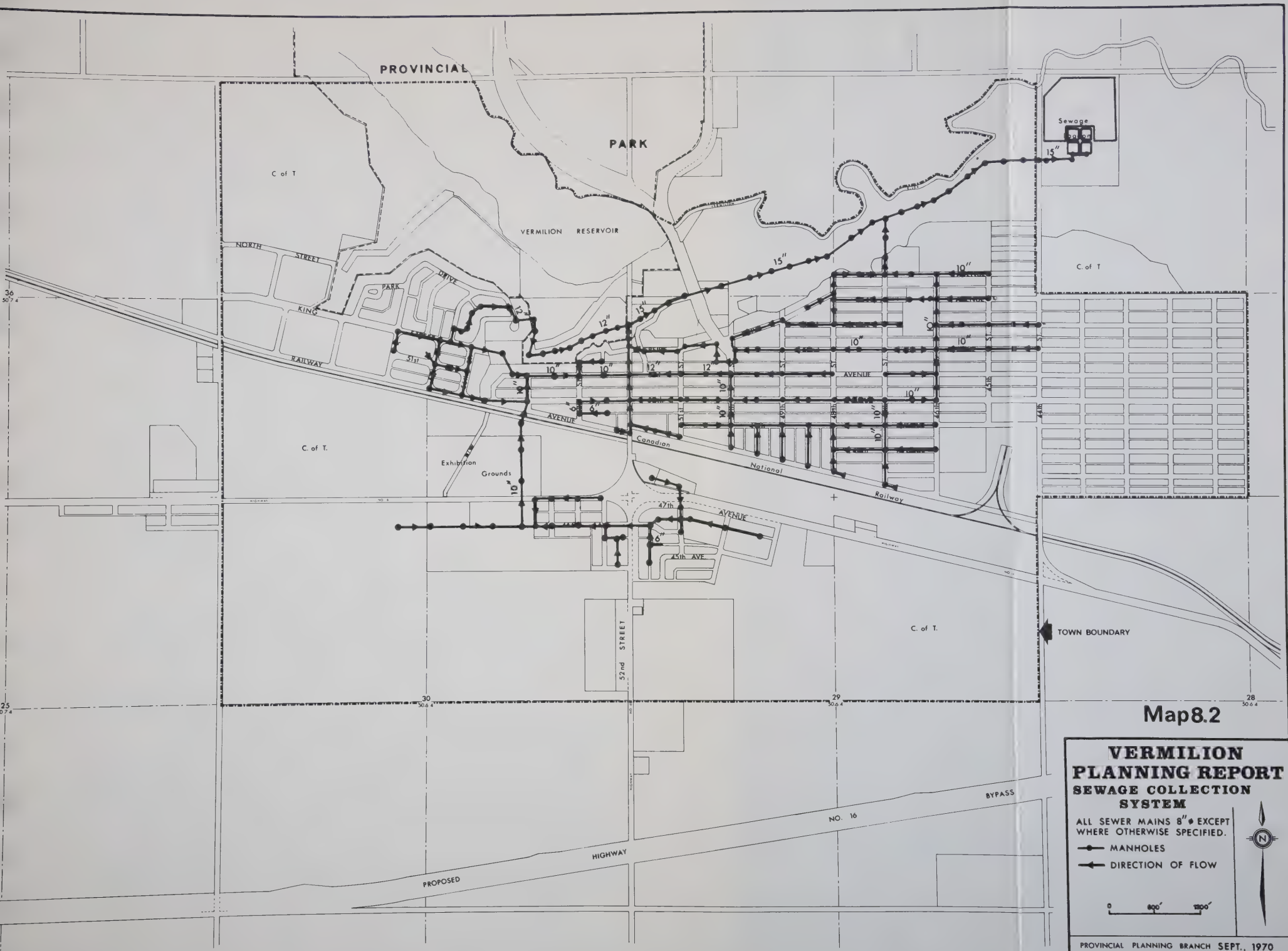
B. SANITARY SEWAGE SYSTEM

1. Collection

All developed areas in the Town of Vermilion are served by sanitary sewers . The sewage collection system is shown on Map 8.2 . The residential district north of the Vermilion Hospital is served by a new twelve inch trunk sewer . It is possible for this trunk sewer to serve any proposed development in the west part of town . A ten inch trunk line has been proposed to serve any extensive development on the east side of town . In addition to the present system the proposed ten inch trunk line will serve the projected development in the planning period .

2. Treatment

The town sewage treatment facilities consist of four anaerobic ponds which have a capacity of 420,000 Imperial gallons each , and an aerobic holding pond with a capacity of 17 million Imperial gallons . The effluent from the holding pond drains into the Vermilion River . Under current standards the holding pond requires a seven month detention period . The Department of Environment, Pollution Control Division, estimates that the ponds receive a daily flow of about 162,000 gallons . They advise that



Map8.2

**VERMILION
PLANNING REPORT
SEWAGE COLLECTION
SYSTEM**

ALL SEWER MAINS 8" Ø EXCEPT
WHERE OTHERWISE SPECIFIED.

- MANHOLES
- DIRECTION OF FLOW

0 800' 1600'

PROVINCIAL PLANNING BRANCH SEPT., 1970

the holding pond is not adequate and the town will be required to upgrade their sewage treatment facility. The 162,000 gallon figure appears, however, to be very conservative. A daily average water consumption for the eight months, September 1969 to April 1970, was 208,555 gallons. This is the volume that can be expected to become sewage flow using accepted design methods. In order to have a seven month detention period in the holding pond it would have to hold 43 million gallons. This means that the pond should be over two times its present size or approximately 32 acres. Using the population projections it is estimated that by 1991 the holding pond will be required to have an area approximately five times its present size.

3. Recommendations

It is recommended that a Professional Engineer be hired to assess the present treatment facilities and prepare a comprehensive report on the needs of the town with regard to sewage treatment for the planning period.

C. SURFACE DRAINAGE

The Town of Vermilion has only two areas served by storm sewers. One system serves the downtown area and discharges into the Vermilion River near the lower end of the reservoir. The Agricultural College area is drained by a storm sewer which discharges into a ravine and thus into the reservoir. The remaining parts of the town are drained by gutters and ditches only. The drainage

outfalls and existing storm sewers are shown on Map 8.3.

There are three areas in the town that have flooding problems during peak flow periods. Two areas are the lanes north and south of 53rd Avenue between 45th and 46th Streets and the third is the lane south of King Street between 56th and 57th Streets. These areas should be given major priority for future storm sewer or drainage expenditure.

In 1967 Associated Engineering Services Ltd. prepared a Report on the Overall Drainage Survey for the Town of Vermilion. The object of the report was to establish a drainage pattern for the town and to make recommendations for a proposed staged paving program. This report should serve as a guide for the extension of existing sewer systems or the start of completely new systems.

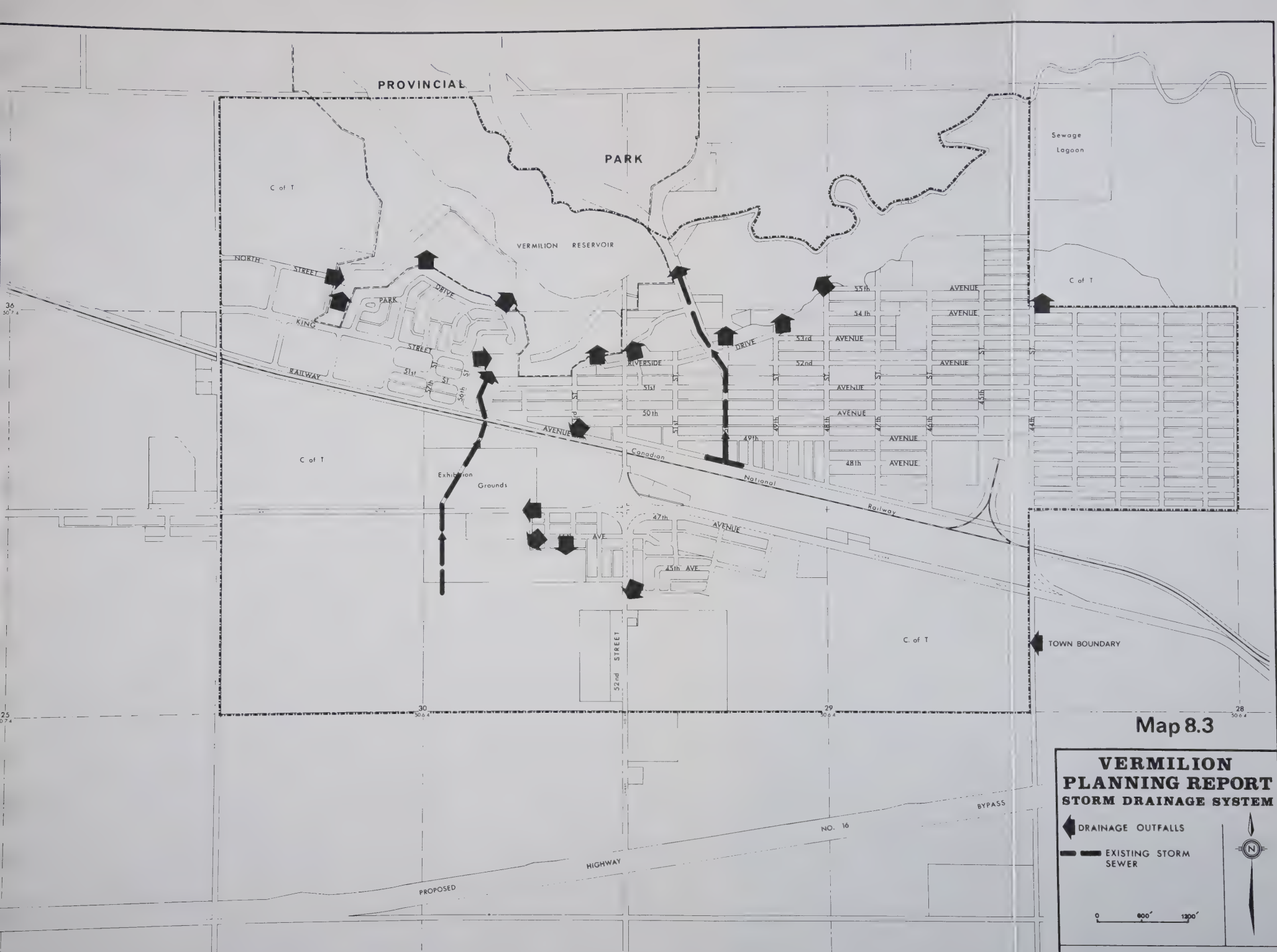
D. OTHER UTILITIES

1. Natural Gas Distribution¹

Natural gas is supplied to the Town of Vermilion by Northwestern Utilities Limited. The source of gas for Vermilion is the north branch of the Kinsella gas field in winter and the Wildmere field in summer.

In 1969 there were 905 customers in Vermilion and 308,680 MCF (thousand cubic feet) of gas was consumed. Maximum capacity of the existing supply line from Kinsella is 3.1 million cubic feet per day. Northwestern Utilities is prepared to make the necessary improvements to meet additional requirements.

¹ Correspondence with H. A. Coffin, Distribution Engineer, Northwestern Utilities, Limited



The charges for gas services are slightly lower than those for other towns of similar size due to a shorter transmission distance from the source .

The gas system which has been installed in this community is adequate at present and Northwestern Utilities indicates that the system will be extended as the demand warrants . The present system is shown on Map 8.4

2. Electrical Distribution²

Power is supplied to the Town of Vermilion by Canadian Utilities Limited . Vermilion is connected to the provincial power grid at Red Deer and at Edmonton . The steam power plant located at Vermilion has been decommissioned because of its relatively small capacity in comparison to the high voltage transmission lines .

The electrical distribution and street lighting system is shown on Map 7.5 . Power lines can be readily extended to areas not covered should new power requirements develop . In 1969 there were 8,412,000 KWHs consumed by 1,068 customers . There is no practical limit to the amount of power available to Vermilion . The high voltage lines have capacity to carry many times their existing load .

It is recommended that all electrical lines that are installed in the future be placed underground in order to help create a pleasant residential environment .

² Correspondence with J. E. Bagshaw, Vice President, Marketing, Canadian Utilities Limited

3. Telephone

Vermilion has a comprehensive telephone service provided by Alberta Government Telephones. Service is easily available to anyone in the town or surrounding area. It is recommended that all residential telephone lines be placed underground.

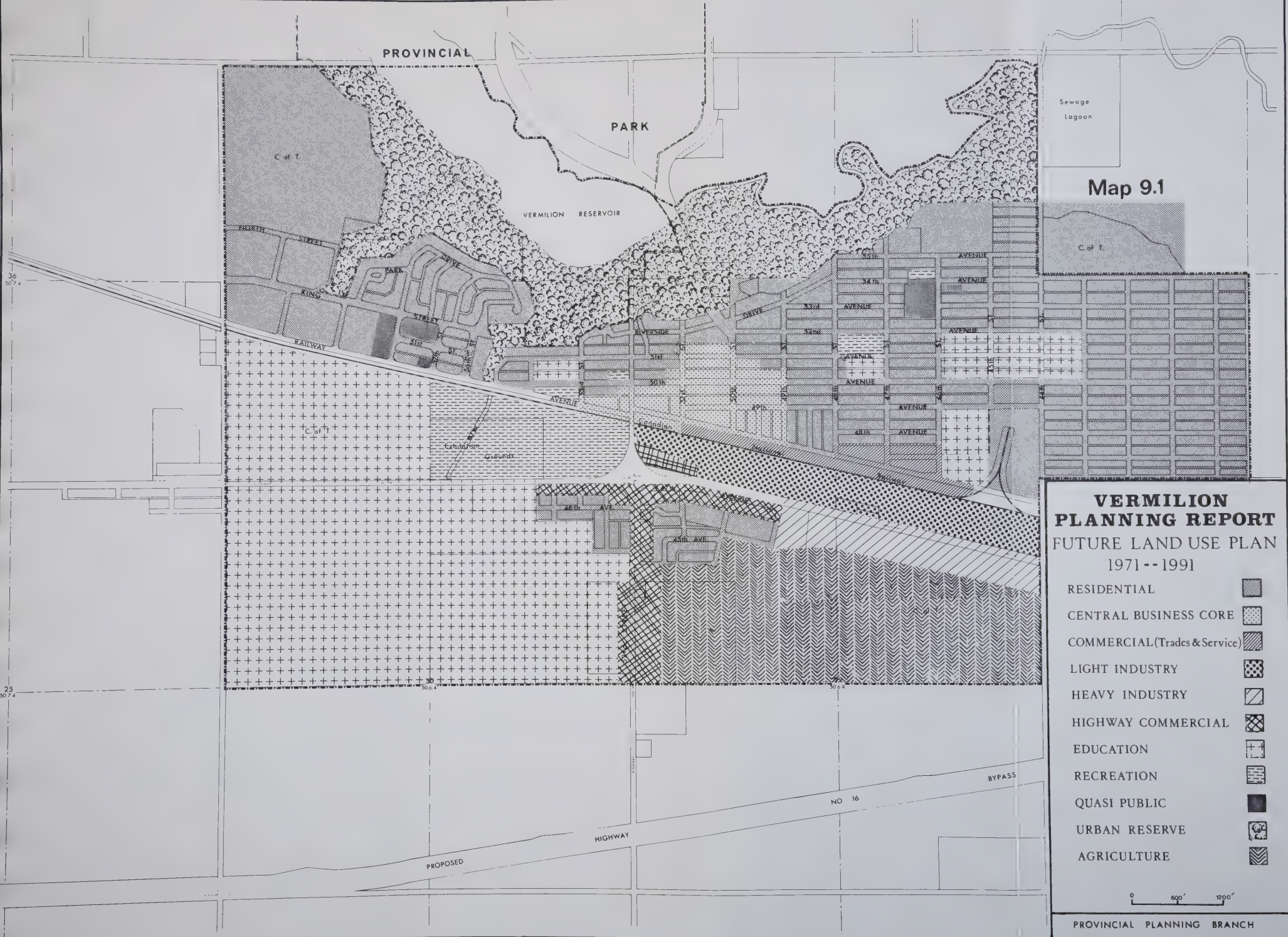
4. Garbage Disposal

The Town of Vermilion provides garbage collection service in the town. A 17-yard Packer truck is used to collect garbage weekly in residential areas and daily in commercial areas. At present garbage is disposed of by open burning and filling in an abandoned gravel pit north-east of town. The town is in the process of acquiring land to the west of the present disposal site. This area is suitable for modified landfill disposal methods.

SUMMARY AND CONCLUSIONS

The report has outlined the growth trends for the Town of Vermilion and has emphasized the land use and other requirements which this expected growth necessitates over the next twenty years. Vermilion is not experiencing, nor is it likely to experience, rapid growth similar to such centres as Fort McMurray or Grande Prairie. Urban population and urban activities in this part of Alberta, as well as in most other parts of the province, are however continuing to concentrate in fewer urban centres. The trend has far-reaching effects, including the concentration of grain elevators, the most basic function of so many Prairie settlements. It is in this trend that the reasons for Vermilion's growth are found.

This growth, however constant, must be planned for. This report has recommended a path for the town to follow in an attempt to provide the best possible conditions for its residents. These recommendations are summarized in the future land use plan, Map 9.1. The task of putting these recommendations into practice, however, rests with the town administration. It is they who must eventually decide what is best for the people of Vermilion and what the town can or cannot afford. It is for this reason that an examination of the municipal financial situation has not been included in this report. The local administration is, by far, in the best position to evaluate the town's financial capabilities with respect to the provision of funds for any future projects.



Following review and discussion of this report, council must decide upon which of the following steps to take:-

1. It may request that a general plan be prepared on the basis of the report.
2. It may decide to remain under development control and use the report as a guide in planning decisions.
3. It may adopt a zoning bylaw on the basis of the report.
4. It may retain the report as a guide for future development and refer to it constantly.
5. It may choose to more or less ignore the report's recommendations.

The last, of course, is not recommended. But which of the other alternatives should Vermilion follow? The adoption of (a) a zoning bylaw based on the future land use map and (b) the report's recommendations as a decision making guide for council, is recommended. Vermilion is not in any financial difficulty; is not undertaking any capital budget projects; is not undergoing rapid growth and therefore does not require a general plan at this time. In five years, however, the report should be reviewed, and taking new developments and trends into consideration, the need for a general plan should be reassessed at that time.

PROVINCIAL

PARK

VERMILION RESERVOIR

Map 3.1

LAND USE CLASSIFICATION

- I. RESIDENTIAL**
 - 1. SINGLE FAMILY
 - 2. COUNTRY RESIDENCE (Less than 1000 sq. ft.)
 - 3. MULTI-FAMILY
 - 4. TRAILER COUNTRY
 - 5. MOBILE HOME ON ONE LOT
 - 6. MULTIFAMILY RESIDENCE (Less than 1000 sq. ft.)
- II. COMMERCIAL**
 - 1. GENERAL SERVICE (Less than 1000 sq. ft.)
 - 2. RETAIL (Less than 1000 sq. ft.)
 - 3. WHOLESALE (Less than 1000 sq. ft.)
 - 4. SERVICE (Less than 1000 sq. ft.)
 - 5. RESTAURANT (Less than 1000 sq. ft.)
 - 6. NIGHT CLUB (Less than 1000 sq. ft.)
 - 7. THEATRE (Less than 1000 sq. ft.)
 - 8. MOTEL (Less than 1000 sq. ft.)
 - 9. SERVICE STATION
 - 10. PARKING LOT
- III. INDUSTRIAL**
 - 1. MANUFACTURING (Less than 1000 sq. ft.)
 - 2. STORAGE (Less than 1000 sq. ft.)
 - 3. WAREHOUSE (Less than 1000 sq. ft.)
 - 4. OFFICE (Less than 1000 sq. ft.)
 - 5. LABORATORY (Less than 1000 sq. ft.)
 - 6. RESEARCH (Less than 1000 sq. ft.)
 - 7. DEVELOPMENT (Less than 1000 sq. ft.)
 - 8. INDUSTRIAL (Less than 1000 sq. ft.)
 - 9. INDUSTRIAL (Less than 1000 sq. ft.)
 - 10. INDUSTRIAL (Less than 1000 sq. ft.)
- IV. GOVERNMENTAL**
 - 1. GOVERNMENT (Less than 1000 sq. ft.)
 - 2. GOVERNMENT (Less than 1000 sq. ft.)
 - 3. GOVERNMENT (Less than 1000 sq. ft.)
 - 4. GOVERNMENT (Less than 1000 sq. ft.)
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 - 8. GOVERNMENT (Less than 1000 sq. ft.)
 - 9. GOVERNMENT (Less than 1000 sq. ft.)
 - 10. GOVERNMENT (Less than 1000 sq. ft.)
- V. EDUCATIONAL FACILITIES**
 - 1. SCHOOL (Less than 1000 sq. ft.)
 - 2. COLLEGE (Less than 1000 sq. ft.)
 - 3. UNIVERSITY (Less than 1000 sq. ft.)
 - 4. LIBRARY (Less than 1000 sq. ft.)
 - 5. MUSEUM (Less than 1000 sq. ft.)
 - 6. THEATRE (Less than 1000 sq. ft.)
 - 7. CONVENT (Less than 1000 sq. ft.)
 - 8. CHURCH (Less than 1000 sq. ft.)
 - 9. MONASTERY (Less than 1000 sq. ft.)
 - 10. NUNNERY (Less than 1000 sq. ft.)
- VI. RECREATIONAL FACILITIES**
 - 1. PARK (Less than 1000 sq. ft.)
 - 2. GOLF COURSE (Less than 1000 sq. ft.)
 - 3. RACETRACK (Less than 1000 sq. ft.)
 - 4. CASINO (Less than 1000 sq. ft.)
 - 5. THEATRE (Less than 1000 sq. ft.)
 - 6. CONVENT (Less than 1000 sq. ft.)
 - 7. CHURCH (Less than 1000 sq. ft.)
 - 8. MONASTERY (Less than 1000 sq. ft.)
 - 9. NUNNERY (Less than 1000 sq. ft.)
 - 10. INDUSTRIAL (Less than 1000 sq. ft.)
- VII. TRANSPORTATION AND COMMUNICATION**
 - 1. AIRPORT (Less than 1000 sq. ft.)
 - 2. RAILROAD (Less than 1000 sq. ft.)
 - 3. HIGHWAY (Less than 1000 sq. ft.)
 - 4. CANAL (Less than 1000 sq. ft.)
 - 5. BRIDGE (Less than 1000 sq. ft.)
 - 6. TUNNEL (Less than 1000 sq. ft.)
 - 7. TELEPHONE EXCHANGE (Less than 1000 sq. ft.)
 - 8. TELEVISION EXCHANGE (Less than 1000 sq. ft.)
 - 9. RADIO EXCHANGE (Less than 1000 sq. ft.)
 - 10. TELECOMMUNICATIONS (Less than 1000 sq. ft.)
- VIII. UTILITIES**
 - 1. WATER (Less than 1000 sq. ft.)
 - 2. SEWER (Less than 1000 sq. ft.)
 - 3. GAS (Less than 1000 sq. ft.)
 - 4. ELECTRIC (Less than 1000 sq. ft.)
 - 5. RAILROAD (Less than 1000 sq. ft.)
 - 6. HIGHWAY (Less than 1000 sq. ft.)
 - 7. CANAL (Less than 1000 sq. ft.)
 - 8. BRIDGE (Less than 1000 sq. ft.)
 - 9. TUNNEL (Less than 1000 sq. ft.)
 - 10. TELECOMMUNICATIONS (Less than 1000 sq. ft.)
- IX. AGRICULTURAL**
 - 1. FARM (Less than 1000 sq. ft.)
 - 2. RANCH (Less than 1000 sq. ft.)
 - 3. PASTURE (Less than 1000 sq. ft.)
 - 4. WOODLAND (Less than 1000 sq. ft.)
 - 5. WETLAND (Less than 1000 sq. ft.)
 - 6. WATERSHED (Less than 1000 sq. ft.)
 - 7. WATERSHED (Less than 1000 sq. ft.)
 - 8. WATERSHED (Less than 1000 sq. ft.)
 - 9. WATERSHED (Less than 1000 sq. ft.)
 - 10. WATERSHED (Less than 1000 sq. ft.)
- X. VACANT LAND**
 - 1. UNDEVELOPED (Less than 1000 sq. ft.)
 - 2. UNDEVELOPED (Less than 1000 sq. ft.)
 - 3. UNDEVELOPED (Less than 1000 sq. ft.)
 - 4. UNDEVELOPED (Less than 1000 sq. ft.)
 - 5. UNDEVELOPED (Less than 1000 sq. ft.)
 - 6. UNDEVELOPED (Less than 1000 sq. ft.)
 - 7. UNDEVELOPED (Less than 1000 sq. ft.)
 - 8. UNDEVELOPED (Less than 1000 sq. ft.)
 - 9. UNDEVELOPED (Less than 1000 sq. ft.)
 - 10. UNDEVELOPED (Less than 1000 sq. ft.)

TOWN OF VERMILION
 SCALE: 1"=100'
 OCTOBER, 1970
 PREPARED BY THE PROVINCIAL PLANNING BRANCH

